



CANADA YEAR BOOK

1957-58

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The opening of the Twenty-Third Parliament of Canada on October 14, 1957, was an occasion of unprecedented significance for Canadians. Her Majesty Queen Elizabeth II, accompanied by His Royal Highness the Prince Philip, read the Speech from the Throne and thus became the first Sovereign to inaugurate in person a session of Parliament as Head of State of Canada.

Canada Bureau of Statistics

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CANADA YEAR BOOK

1957-58

THE OFFICIAL STATISTICAL ANNUAL OF THE RESOURCES,
HISTORY, INSTITUTIONS, AND SOCIAL AND ECONOMIC
CONDITIONS OF CANADA

Published by Authority of
The Honourable Gordon Churchill, Minister of Trade and Commerce

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INFORMATION SERVICES DIVISION
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OTTAWA, 1958



PREFACE

The 1957-58 edition of the Canada Year Book continues a series of annual publications giving official statistical and other information on almost every measureable phase of Canada's development. As the economy of the country has expanded, the Dominion Bureau of Statistics has extended its program of statistical compilation and analysis and the Canada Year Book has endeavoured to present the story of this development, summarizing a great mass of detailed statistical information concisely within the covers of one volume and supplementing it with data from other Departments of the Federal Government and from the provinces.

Special feature articles are presented in each edition of the Year Book. Those in the current issue include: The International Geophysical Year" (pp. 35-38); "Developments in Canadian Immigration" (pp. 154-176); "Health in Canada" (pp. 232-235); "The Philosophy of the Royal Canadian Mounted Police" (pp. 332-334); "Postwar Agriculture" (pp. 392-396); "The Pulp and Paper Research Institute of Canada" (pp. 489-491); "Canada's Mineral Industry 1956-57" (pp. 495-518); "Groundfish Species in the Canadian Fisheries" (pp. 591-595); "The Changing Pattern of Canada's Housing" (pp. 732-734); "History of the Labour Movement in Canada" (pp. 795-802); "The Telecommunications Branch of the Department of Transport" (pp. 894-896); and "A History of Canadian Journalism 1752 (circa)-1900" (pp. 920-934).

In addition, other features have been introduced and extensive revisions made in the textual and statistical material of the various chapters. Among these are analyses of the Population and Agriculture Census of 1956; an expanded treatment of the executive and legislative branches of the Federal Government and a revised summary and chart on the administrative functions of its various departments and agencies; a brief outline of Canada's international activities during 1955-57; a new survey of formal education and an initial account of the Canada Council in support of the arts, letters and social sciences; a further instalment on the construction of the St. Lawrence Seaway and Power Project and of oil and gas pipelines, as well as the up-dating of basic material dealing with such subjects as immigration, vital statistics, public health and welfare, scientific, medical and industrial research, forestry, water power development, mineral production, manufacturing, the labour force, prices, public finance, banking, insurance, transportation and communication by various media, the domestic marketing of commodities, foreign trade, national income and expenditure and Canada's international investment position. Numerous charts graphically portray significant trends in the developing Canadian economy, while the Introduction (pp. xi-xix) describes briefly the state of the economy during 1957.

The concluding chapter, entitled "Sources of Official Information and Miscellaneous Data", presents handy reference material listing Government information services, special material published in earlier Year Books, federal legislation of recent sessions of Parliament, a Canadian chronology of events, a register of official appointments, and a statistical summary of the progress of Canada since 1871.

In the Appendix certain material on Government (Chapter II) is brought up to the date of going to press, including a listing of the personnel of the Eighteenth Ministry of Canada and the names and addresses of the Members of the House of Commons elected on Mar. 31, 1958, together with the Fifteenth Ministry of Manitoba.

Enclosed in the pocket on the inside back cover of the volume are two maps: a detailed map depicting the principal mineral areas and a map showing the distribution of population based on the 1956 Census, specially printed on transparent paper to facilitate its use as an overlay on the mineral map.

The present volume has been produced in the Canada Year Book Section of the Information Services Division by Miss M. Pink, Assistant Editor of the Year Book and Chief of the Section, with the assistance of Mr. H. Crombie, Miss C. Freeth and the Year Book staff, under the editorship and direction of Dr. C. C. Lingard, Director of the Division. Charts, graphs and maps (not otherwise credited) have been prepared in the Drafting Unit of the Bureau.

The co-operation of numerous officials of the various Departments of the Canadian and Provincial Governments and of this Bureau in the preparation of material for the Year Book is gratefully acknowledged. Credit by means of footnotes is given where possible either to the persons or to the branches of the public service concerned.

Information bearing on any errors or omissions and suggestions respecting methods of treatment are welcomed by the Director of the Information Services Division.

Walter E. Duffett.

DOMINION STATISTICIAN

DOMINION BUREAU OF STATISTICS,
Ottawa, July 1, 1958.

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WEIGHTS AND MEASURES AND OTHER INTERPRETATIVE DATA

In Canada as a rule the Imperial system of weights and measures is followed. An exception however is the ton where, unless otherwise stated, the short ton of 2,000 lb. is meant. Billion where used represents 1,000 million.

The following table shows the weights and measures used in Canada in connection with the principal field crops and for wheat flour and fruits:—

	<i>Pounds per Bushel</i>		<i>Pounds</i>
Grains—		Fruits (standard conversions)—	
Wheat.....	60	Apples, per barrel.....	135
Oats.....	34	Apples, per box.....	43
Barley.....	48	Pears, per bushel.....	50
Rye.....	56	Plums “ “	50
Buckwheat.....	48	Cherries “ “	50
Flaxseed.....	56	Peaches “ “	50
Corn.....	56	Grapes “ “	50
Mixed grains.....	50	Pears, per box.....	42
All others.....	60	Strawberries, per quart.....	1.25
		Raspberries “ “	1.25
		Loganberries “ “	1.25

Wheat Flour—

1 barrel equals 196 pounds; approximately 4.5 bushels of wheat are used in the production of a barrel of flour.

Relative Weights and Measures, Imperial and United States

The following list of coefficients may be used to translate amounts expressed in one unit to the other. It must be borne in mind that where the list below refers to Imperial pint, quart and gallon, their equivalent in ounces is also in Imperial measure; likewise United States designations for these quantities are shown in the U.S. equivalent in ounces. The Imperial (or British) fluid ounce and the U.S. fluid ounce are different measures, 1 Imperial fluid ounce equalling 0.96 United States fluid ounce. Similarly 1 Imperial gallon equals 1.2 United States gallon.

1 Imperial pint=20 fluid ounces.	1 Imperial proof gallon=1.36 United States proof gallon.
1 United States pint=16 fluid ounces.	1 Short ton=2,000 pounds.
1 Imperial quart=40 fluid ounces.	1 Long ton=2,240 pounds.
1 United States quart=32 fluid ounces.	1 Barrel crude petroleum=35 Imperial gallons.
1 Imperial gallon=160 fluid ounces.	
1 United States gallon=128 fluid ounces.	

Fiscal Years of Federal and Provincial Governments

The fiscal year of the Federal Government and of each of the ten Provincial Governments ends on March 31.

Throughout the Year Book, fiscal year figures are indicated in the text and headings of tables; otherwise figures are for calendar years.

ERRATUM

Page 308: Cross references in the first paragraph to Chapter II should read "pp. 58-59 and 59-60" instead of "pp. 42-43 and 43-44".

INTRODUCTION

THE CANADIAN ECONOMY DURING 1957*

The year 1957 was characterized by a marked levelling off in the rate of economic activity. This change in the upward trend in the major economic indicators in 1957 followed a period of sharp advances during the preceding two years. It will be recalled that in 1955 and 1956 demand was expanding very rapidly and large quarter-to-quarter increases were occurring in the value of the nation's total production, the gross national product. By 1957, however, this quarter-to-quarter advance in final expenditures had slackened appreciably and in the fourth quarter of the year a moderate decline in output was recorded. Gross national product, seasonally adjusted at annual rates, amounted to \$31,460,000,000 in the fourth quarter of the year compared with \$31,748,000,000 in the third quarter, and \$31,443,000,000 for the year 1957 as a whole.

The rapid expansion of investment outlays which was a notable feature of 1955 and 1956 moderated in 1957; investment in machinery and equipment declined in the last three-quarters of the year, and the rate of growth in outlays for non-residential construction slackened. On the other hand, residential construction began to move upward during the year, following a period of successive declines. Accompanying these developments, exports of goods and services, which had earlier provided one of the main stimulants to investment in resource industries, moved irregularly at a level barely in excess of the year 1956. At the same time, the upsurge in imports that occurred in 1956 subsided in 1957, and declines were recorded in the seasonally adjusted value of imports of goods and services throughout the course of the year. Business inventory accumulation, which reached its peak in the middle of 1956, declined steadily throughout 1957 and in the fourth quarter of the year shifted to a position of moderate net liquidation.

It may be noted that while neither final purchases nor inventories were creating new demands on production in the fourth quarter of 1957, a good deal of the effect of the curtailment on the flow of expenditures was mitigated by the decrease in the imports of goods and services which amounted to 4.5 p.c. between the third and fourth quarters of the year.

Associated with these developments on the expenditure side in 1957, national income rose by almost 3 p.c. above the level of the previous year, though it was moving downward in the fourth quarter. Corporation profits declined steadily throughout the year from the peak reached in 1956, and registered a drop of about 7 p.c. on the year-to-year comparison. Labour income continued to rise in 1957 until the fourth quarter of the year, when it moved downward slightly in association with declines in employment; however, on the full year's comparison, labour income was more than 7 p.c. above the level of the year 1956, this being the major factor behind the 5-p.c. rise in personal income. As has been noted, crop production fell sharply in 1957, and this was reflected in a decline of \$400,000,000 in accrued net income of farm operators from farm production. There was a very small gain in net income of unincorporated non-farm enterprises in 1957, in contrast with the fairly substantial gains that had occurred in the preceding two years.

These changes in the main statistical aggregates resulted in a gross national product in 1957 of about \$31,443,000,000, a gain of 4 p.c. over the level of the year 1956 in value terms, but basically unchanged from the preceding year in terms of the physical volume of output; thus, price factors were the major element in the higher value of production in 1957. The unchanged volume of output in 1957 compares with the unusually large gains of about 7 p.c. in 1956 over 1955 and 9 p.c. in 1955 over 1954. It should be noted in this connection that the production figures in 1957 include a sharp drop in crop output. The decline in grain production is estimated to have amounted to about 1 p.c. of the gross national product, so that the non-farm gross national product in 1957 was higher than in 1956 by about 1 p.c. in volume terms.

* Prepared in the Research and Development Division, Dominion Bureau of Statistics.

PRODUCTION BY INDUSTRIES

The physical volume of output of all industries producing goods and services was at about the same level in 1957 as in 1956. When agriculture is removed from the comparison the remaining industries show an increase of about 1 p.c.; this increase was apparent in both the total for services-producing industries and that for goods-producing industries, exclusive of agriculture. These aggregates, however, hide important and divergent movements at the industry level.

During the course of 1957 there was a decrease in the rate of productive activity in certain industries. On a seasonally adjusted basis, goods output (less agriculture) declined throughout the year. Total services output was irregular during 1957 but a general decline was not apparent. The volume of production for manufacturing declined about 8 p.c. between January and December and most of the fall-off was concentrated in the durable manufactures group. Mining production rates kept increasing until April but were unsettled for the remainder of the year. Primary forest output fell off substantially during the year owing to deteriorating export and domestic markets. Transportation industries reflected the rather unsettled industrial production picture in 1957 and tended to move with manufacturing, forestry and mining.

In comparing annual output levels, agriculture was down about 17 p.c. in 1957. The volume of farmers' marketings fell almost 7 p.c. while the volume change in farm grain stocks reflected the substantially smaller crop in 1957. From a production standpoint, grain output in 1957 fell by about one-half as compared with 1956 but production of animal products remained practically unchanged. In the other primary resource industries movements were varied. Forestry output, affected by deteriorating domestic and foreign markets for pulpwood and lumber, was down by more than 11 p.c. Both pulpwood cut and output of other forest products were down by about the same percentage. Fishing and trapping output declined moderately in 1957. Electricity and gas utilities continued to expand; the output of electric power showed a 4-p.c. increase while gas distribution, reflecting the sharply increasing use of natural gas, advanced 14 p.c. The total output of Canadian mines showed one of the smallest increases in the postwar period with a gain of 6 p.c. Metals and fuels were up 12 and 5 p.c. respectively but non-metal mining was down 2 p.c. Uranium production rose sharply and accounted for most of the increment in metals. Small production gains were recorded for gold and nickel, while small decreases showed up in copper, silver, iron ore, lead and zinc. In contrast with recent years when iron ore exports showed substantial gains, only a minor advance was recorded in 1957. During the later months of the year export volume was down from corresponding months of 1956 mainly because of cut-backs in United States' steel-using industries. Within fuels, crude petroleum output rose 6 p.c. and more than offset a 12-p.c. decline in coal production. However, the small increase in petroleum mining represented a substantial change from the very large production gains in recent years.

The physical volume of output of manufacturing industries was off nearly 2 p.c. in 1957 with non-durables up slightly and durables down 5 p.c. Within the non-durable group of manufacturing industries, gains in output were recorded by chemicals, foods and beverages, leather, tobacco and tobacco products and products of petroleum and coal. Almost offsetting these increases, however, were declines in rubber products, textiles, clothing and paper. Printing and publishing showed little change. Within the durable group, every major industry group except non-metallic mineral products, which rose moderately, suffered production set-backs ranging from 2 p.c. in transportation equipment to 9 p.c. in wood products. Iron and steel, non-ferrous metal products and electrical apparatus and supplies declined 5, 6 and 8 p.c. respectively.

Within the services-producing division of industries, only the transportation, storage and communications group reflected reduced volume of activity and this was largely concentrated in railway freight. In the later part of 1957 there was a very noticeable slowdown in activity in civil aviation and oil pipelines—industries which had shown substantial gains in recent years. The communications component continued to expand, reflecting the substantial expansion of radio and television broadcasting and telephone

services. Retail and wholesale trade volume showed little change in 1957 compared with 1956. Two important changes occurred within retail trade—grocery chains increased their volume of sales by more than 8 p.c. and motor vehicle dealers suffered a decline of about 10 p.c. Within the other services-producing industries—including finance, insurance and real estate, and government and other services—available related data suggest increased volume of activity ranging from 3 to 5 p.c.

EMPLOYMENT

Turning now to employment, the number of persons with jobs in 1957 averaged 5,661,000, a gain of 135,000 or 2.4 p.c. over 1956. The number of persons with jobs in the non-agricultural sector rose by about 3.4 p.c. It may be noted that this increase in non-farm employment was considerably higher than the year-to-year gain in non-farm production, which was estimated to have risen by only about 1 p.c. The divergence between the employment and output indicators implies a decline in output per person employed in 1957. This development may be partly explained by a decline in average hours worked per week in 1957 since such a decline occurred in manufacturing and mining. Another factor may be the reluctance of employers to dismiss workers in the initial stages of production cut-backs pending clarification of the outlook for new orders. Also, there is some evidence to suggest that in both Canada and the United States the very large additions to plant capacity in recent years have increased the need for administrative and over-head staff relative to the requirements for production workers.

The increment to the labour force in 1957 was 210,000, almost twice the average rate of growth in the preceding five years. This unusually large increase is associated with higher participation rates as well as with the extraordinarily high level of immigration in 1957. The number of persons without jobs and seeking work averaged 254,000 persons for the full year, that is, 4.3 p.c. of the labour force compared with 3.1 p.c. in 1956. In addition, the number of persons on short time or temporarily laid off averaged about 50 p.c. higher than in the preceding year. In the fourth quarter of 1957, persons without jobs and seeking work accounted for 5.0 p.c. of the labour force.

PRICES

Final product prices continued to advance throughout 1957, though the rate of increase slackened appreciably during the course of the year. It is estimated that the price element in the gross national product rose by only about one-quarter of 1 p.c. from the third to the fourth quarter, constituting the smallest quarter-to-quarter increase in a two-year period. For the year as a whole, end product prices in 1957 averaged about 4 p.c. above those of the year 1956.

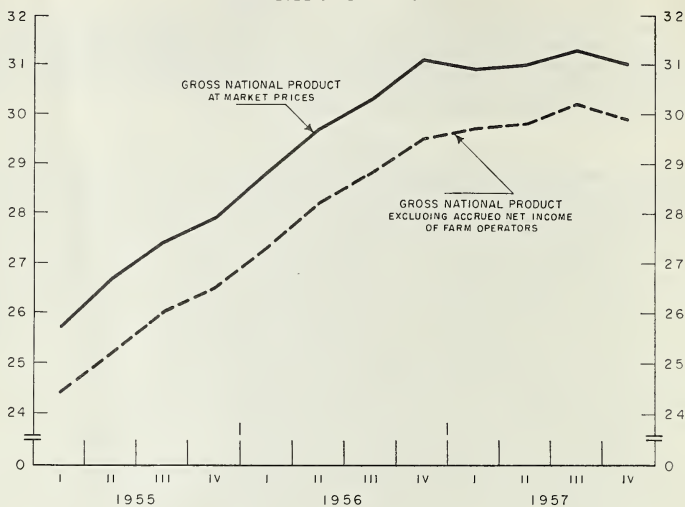
The 3.7-p.c. advance in the consumer sector in 1957 was substantially greater than the price rise in this sector in the preceding year, when it amounted to only 1.7 p.c. The 4.1-p.c. rise in the price of investment goods in 1957, however, was slightly less than the previous year's rise of 5.6 p.c.

After the end of 1956, the advance in final product prices was not accompanied by price increases as measured by the general wholesale price index; from the fourth quarter of 1956 through to the fourth quarter of 1957, the wholesale price index declined by about 1 p.c. compared with an advance of 3 p.c. for the corresponding period of 1956. The prices of raw and partly manufactured goods and of industrial materials declined by 5 and 7 p.c. respectively in this period, compared with gains of 2 and 3 p.c. in the same period a year previously. Fully and chiefly manufactured goods advanced by 1 p.c. from the end of 1956 to the fourth quarter of 1957, compared with an advance of 4 p.c. for the same period of the preceding year. From the third to fourth quarters of 1957, the wholesale price index declined by about 1 p.c. The impact of these changes in wholesale prices is, to some extent, reflected in the valuation of inventories by business. It is estimated that the inventory valuation adjustment required for national accounts purposes amounted to only about \$60,000,000 for the year 1957, compared with the \$260,000,000 adjustment made in 1956.

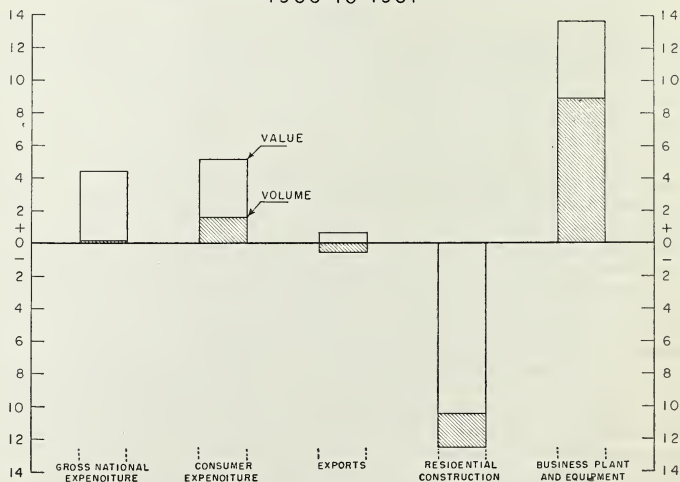
GROSS NATIONAL PRODUCT, 1955-1957

(SEASONALLY ADJUSTED ANNUAL RATES)

BILLION DOLLARS



PERCENTAGE CHANGES IN VALUE AND VOLUME OF GROSS NATIONAL EXPENDITURE AND SELECTED COMPONENTS 1956 TO 1957



THE COMPONENTS OF GROSS NATIONAL EXPENDITURE

Personal consumption expenditures rose to \$19,768,000,000 in 1957, close to 6 p.c. higher than in 1956. All the increased spending was on services and non-durables; purchases of durables remained stable. The major part of the rise in total spending represents the higher prices prevailing in the consumer sector. The modest increase in the real volume of consumption in 1957 is in contrast to the decided gains recorded in the two preceding years; on a per capita basis, real consumption fell slightly, the first such decline since 1950-51.

Purchases of non-durable goods were up about 5 p.c., with the largest gains in food, alcoholic beverages, tobacco and gasoline. Purchases of clothing were moderately higher. Prices of non-durable goods averaged nearly 3 p.c. higher in 1957, mainly as a result of the rise in prices of food, so that real consumption was to that extent lower than the value figures indicate.

Outlays for durable goods were stable in 1957. House furnishings was the only category of durable goods that showed any increase. Purchases of appliances and radios were about the same as in 1956. In real terms, purchases of durables in 1957 were about 3 p.c. below the level of the preceding year.

In this connection, it is interesting to note that consumer credit outstanding on the books of instalment finance companies increased only 3 p.c. in 1957, in contrast to increases of 26 p.c. in 1956 and 22 p.c. in 1955, both years in which purchases of durables were high and rising.

Consumer expenditure on services rose 9 p.c., with increases recorded in all the groups. One of the largest gains was in expenditure on shelter, reflecting the addition to the stock of housing and the rise in rents. Spending on personal service and medical care rose substantially. The rise in prices, some 4.5 p.c., was very pronounced in the services sector.

GOVERNMENT EXPENDITURE ON GOODS AND SERVICES

Government expenditure on goods and services amounted to \$5,612,000,000 in 1957, 7 p.c. higher than in 1956, with the major increases at the provincial and municipal levels. Most of the increase at all levels of government was accounted for by larger expenditures for wages and salaries and for construction.

BUSINESS GROSS FIXED CAPITAL FORMATION

In 1955 and 1956 the high and rising demand in world markets for the products of Canada's resource-based industries encouraged a vigorous expansion of productive capacity. This expansion centred on those industries producing raw materials and radiated to the fuel, power and transportation industries. Accordingly, an unusually large number of such projects were initiated in those years. In 1957, business expenditures for plant and equipment rose to \$5,965,000,000, an increase of nearly 14 p.c. over the preceding year. This increase reflected the large number of projects undertaken in earlier years and at various stages of completion in 1957, as well as those launched during 1957. The 1957 gain compares with an increase of 37 p.c. in 1956 and thus represents a distinct slowing down in the extraordinarily high rate of growth characteristic of the latter year.

Within business expenditures for plant and equipment, the emphasis in 1957 shifted strongly toward new construction which, at \$3,233,000,000, was about 25 p.c. higher than in 1956. This shift was partly attributable to the fact that expenditures on such major projects as the St. Lawrence Seaway and Power Project and the Trans-Canada Pipeline were moving towards their peak in 1957. Expenditures for new machinery and equipment were \$2,732,000,000, only about 3 p.c. higher than in 1956, in contrast to an increase of 34 p.c. in the preceding year. Purchases of machinery and equipment appear to have reached their peak in the first quarter of the year. Both domestic shipments and imports of the main categories of machinery and equipment declined in the second half of 1957.

Considering the business investment program in 1957, major increases occurred in transportation and storage where a gain of 50 p.c. followed one of 87 p.c. in the previous year, and in public utility operation where a gain of 24 p.c. followed one of 49 p.c. in 1956. These two groups, which had absorbed about 29 p.c. of total business investment in 1956, accounted for 54 p.c. of the total in 1957. The two major projects mentioned earlier, the Seaway and the Trans-Canada Pipeline, were in part responsible for the importance of these two groups. The increases in capital expenditures in service industries, trade and communications were also fairly large, ranging from 16 to 19 p.c. On the other hand, capital expenditures in manufacturing were only slightly higher than in the previous year, with substantial increases in some manufacturing industries nearly counterbalanced by declines in others. In mining, quarrying and oil wells, there was a further advance over 1956 but in the other primary industries, and in the construction industry, capital expenditures were lower than in the preceding year, much the most marked rate of decline being in forestry where new investment fell by more than 40 p.c.

Expenditures on new residential construction in 1957 amounted to \$1,424,000,000, 7 p.c. lower than in 1956. In response to easier conditions in mortgage markets and an improved supply of labour and materials, housing starts, which on a seasonally adjusted basis had been falling during 1956, made a strong recovery during 1957, and by the last quarter of the year were running at a rate of nearly 150,000 units compared with about 86,000 in the first quarter. For the year as a whole, about 122,000 housing units were started and about 117,000 completed, compared with 127,000 starts and 136,000 completions in 1956.

Of the 9-p.c. increase in total business gross fixed capital formation, about half represented higher prices. The largest element of price increase, about 5 p.c., was in the machinery and equipment sector, with the result that the volume of such purchases was lower by 2 p.c. In residential construction the price factor amounted to about 3 p.c., leaving this component lower in real terms by about 9 p.c.; in non-residential construction, the element of price increase was somewhat larger, leaving the volume of such expenditures higher by more than 20 p.c.

INVESTMENT IN INVENTORIES

The addition to inventories is estimated to have been \$142,000,000 in 1957 compared with \$815,000,000 in 1956. This sharp decline in the rate of accumulation reflects some liquidation of farm stocks and a marked slackening in the rate of build-up of business inventories, which amounted to \$243,000,000 in 1957 compared with about \$545,000,000 in 1956. The peak rate of accumulation reached in the second quarter of 1956 gave way to a falling rate of investment in stocks which continued until the last quarter of 1957 when some liquidation took place.

The lower rate of investment in business inventories in 1957 was common to almost all industry groups but was especially pronounced in manufacturing. Among manufacturing industries, the most marked decline occurred in iron and steel and in pulp and paper products; two other industries, electrical apparatus and supplies and wood and wood products, shifted from accumulation in 1956 to liquidation in 1957. Only a few manufacturing industries showed a higher rate of accumulation in 1957 than in 1956, foods and beverages being among them. There was some build-up in the clothing industry in 1957, as opposed to a drawing-down of stocks in 1956.

Additions to stocks of retailers and wholesalers were also much lower in 1957 than in the preceding year. In the durable groups there was either a smaller rate of accumulation or actual liquidation; in the non-durables group, however, accumulation in some instances was higher than in the preceding year.

EXPORTS AND IMPORTS OF GOODS AND SERVICES

Exports of goods and services amounted to \$6,375,000,000 in 1957, a fractional increase over 1956 which compares with increases of about 10 p.c. in the two preceding years. A small gain in commodity exports in 1957 was partially offset by a decline in receipts from invisible items.

Canada's exports of goods and services rose sharply in 1955 and 1956, against a background of continued expansion of industrial production in Western Europe, of recovery from recession in the United States, and a greatly enhanced capacity to supply many of the basic commodities demanded on world markets. In 1957, markets for some primary products weakened, with the result that commodity exports at \$4,909,000,000 were very little higher than in 1956. Further advances in exports of the products of some newly developed resource industries helped to offset losses elsewhere—for example, the gains in uranium and oil. However, of the nine commodity groups, only two were lower than in 1956: exports of agricultural and vegetable products were off more than \$140,000,000 or about 15 p.c., reflecting the sharp reduction in sales of wheat and other grains; in the wood, wood products and paper group, a drop of 4 p.c. was associated with weaker markets for lumber and wood pulp. A gain of 5 p.c. in exports of non-ferrous metals and their products was the outcome of a large increase in sales of uranium, from \$46,000,000 to \$128,000,000, a substantial increase in exports of nickel, and declines in all other major metals; the decline in exports of copper, lead and zinc products (the prices of which were down considerably) amounted to about \$50,000,000 or 16 p.c. Exports in the non-metallic group were up 19 p.c. Crude petroleum exports were \$141,000,000, a 36-p.c. gain despite the marketing problems that developed during the course of the year, and significant gains were reported in the exports of asbestos and asbestos products. Exports of iron and its products were higher by about 13 p.c., reflecting increases in farm and other machinery as well as in sales of iron ore. Additional gains were made in animal and animal products where exports were up about \$42,000,000 or 16 p.c., almost all of which was attributable to a more than four-fold increase in sales of cattle.

Receipts from invisibles were \$1,466,000,000 in 1957, nearly 3 p.c. lower than in 1956. Receipts from tourists and on interest and dividend account were higher but receipts from freight, miscellaneous items and sales of gold declined.

Imports of goods and services, at \$7,758,000,000, showed very little change in 1957 from the level of the previous year, a relative stability contrasting with gains of 19 and 16 p.c. in 1956 and 1955. The value of commodity imports in 1957 was, in fact, somewhat lower than in 1956, but payments for services rose.

Imports of commodities amounted to \$5,487,000,000 in 1957, a drop of about 1.5 p.c. from the preceding year. The earlier strong upward trend was reversed during the course of the year and was associated with the turn-around in machinery and equipment outlays, the falling rate of inventory accumulation, and the lower level of consumer outlays for durables. Imports of passenger cars and trucks were down 21 p.c., farm implements and machinery by 13 p.c., mining and metallurgical machinery by 9 p.c., and rolling-mill products by 6 p.c. Imports of iron and its products in total were lower by 4 p.c. in contrast to the impressive increases in this category in the two preceding years (nearly 40 p.c. in 1956). Imports of non-ferrous metals and products were also somewhat lower. The changes in the main commodity groups, positive and negative, were all fairly small.

Payments for services rose to \$2,271,000,000 in 1957, about 4 p.c. higher than in 1956. The most important element in this increase was the 16-p.c. increase in interest and dividends paid abroad but there were also increases in the other invisible items, the single exception being freight and shipping for which payments were slightly lower.

The deficit on international current account was \$1,383,000,000 in 1957, only slightly above the previous peak reached in 1956. However, the imbalance on services was sharply higher, rising from \$624,000,000 to \$805,000,000 and displacing merchandise trade as the principal source of the deficit. By the fourth quarter of 1957, the deficit had fallen to an annual rate of \$1,100,000,000, from the peak in the second quarter of \$1,600,000,000.

The rise in price in the external sector was comparatively small in 1957. While export prices receded a little during the course of the year, they averaged slightly higher for the year as a whole than in 1956. The margin of increase was somewhat greater for import prices. Thus, in terms of volume, exports of goods and services were stable while imports of goods and services showed a slight reduction.

THE COMPONENTS OF GROSS NATIONAL PRODUCT

LABOUR INCOME

Labour income rose to \$15,825,000,000 in 1957, more than 7 p.c. above the year 1956. With the number of paid workers up about 3 p.c. and hours of work somewhat reduced in some major industries, a large part of this increase was attributable to higher wage rates.

Almost all industrial groups shared in the advance. The service industries continued to absorb more workers, in keeping with the postwar trend in the growth of these industries. Thus, the largest income gains were recorded in the services-producing industries, with increases of between 10 and 14 p.c. in trade, finance, insurance and real estate, services proper (personal, business, community, recreational and government), public utilities and communications. The increase in labour income in the mining industry was of the same general order, reflecting an advance in employment and in wage rates. In manufacturing, where somewhat increased employment and higher wage rates were offset by shorter hours, the rise in labour income was 5 p.c. The 8-p.c. advance in labour income in the construction industry contrasted with the very much larger gains recorded in this industry in the previous year. Forestry was the only major industry in which labour income declined, reflecting the sharply reduced employment and income in this industry in the latter part of the year.

INVESTMENT INCOME

Investment income in 1957 was \$4,684,000,000, an amount 2 p.c. lower than in the preceding year. A drop in corporate profits of about 7 p.c., coupled with a further substantial advance in dividends paid abroad, reduced corporate profits entering national income by 11 p.c. Government investment income was little changed in total, since the fall in government trading profits (mainly the result of reduced earnings of the Canadian National Railways) was approximately offset by increases in other components of government investment income. Interest, dividends and net rental income of persons rose by 11 p.c.

Among the major divisions, the only industries showing higher profits in 1957 were finance and retail trade, where increases were both 8 p.c.; within manufacturing, only the food and petroleum industries earned larger profits in 1957, with gains of 7 and 5 p.c. respectively. Profits fell most sharply in the wood products and non-ferrous metal groups of manufacturing. In the mining industry the rate of decline was 27 p.c. to 30 p.c. The deterioration in foreign and domestic markets reduced prices and curtailed output for some of the products of these industries, with consequent adverse effects on earnings. Profits in transportation, communications, storage and public utilities as a group were down about 6 p.c.

NET INCOME OF UNINCORPORATED BUSINESS

Accrued net income of farm operators from farm production is estimated to be \$968,000,000, \$400,000,000 less than in 1956, a decrease reflecting mainly the much smaller crop of major grains in the Prairie Provinces. According to preliminary estimates, however, farm cash income is estimated to have declined by only 5 p.c.; smaller participation payments by the Canadian Wheat Board and lower returns from sales of grains and poultry products accounted for this decline.

Net income of non-farm unincorporated business amounted to \$1,941,000,000 in 1957, slightly higher than in the preceding year. Incomes in trade and services continued to rise, reflecting the growth of consumer demand in these sectors, but the lower level of housing adversely affected net income in the construction industry.

INDIRECT TAXES LESS SUBSIDIES

Indirect taxes less subsidies amounted to \$3,802,000,000 in 1957, about 6 p.c. higher than in 1956. The easing in the demand for imports was reflected in lower yields from customs import duties but this loss in revenue was more than offset by higher yields from excise duties and taxes, leaving federal indirect taxes about 1 p.c. above the level of 1956. Provincial and municipal revenues from indirect taxes increased by roughly similar proportions, 9 or 10 p.c., with the bulk of the increase attributable to gasoline taxes at the

provincial level and to real and personal property taxes at the municipal level. Subsidies were lower by \$13,000,000, mainly because of smaller payments by the Federal Government on the cost of storing grain.

PERSONAL INCOME AND SAVING

Personal income amounted to \$23,142,000,000 in 1957, an increase of about 5 p.c. over the preceding year; this was a significantly larger increase than occurred in national income, which rose by only 3 p.c. Transfer payments advanced by 18 p.c. and showed the largest gain of any component of personal income. Rates of payment under the family allowance and old age security schemes were raised during the course of the year and a new transfer payment out of oil royalties was introduced in the Province of Alberta. The larger volume of unemployment, together with some extension of benefits, raised payments in the form of unemployment benefits by 45 p.c. Maintenance of dividend payments despite a fall in corporate profits was another factor in the divergence between national and personal income.

With a progressive tax structure, the rise in taxable incomes made for a fairly sharp increase in personal direct taxes, which were up 11 p.c. Income at the disposal of consumers for spending amounted to \$21,235,000,000, 5 p.c. above the level of 1956. Since consumer prices were over 3 p.c. higher, personal disposable income in real terms advanced only moderately, in contrast to the substantial advance that occurred in 1956; on a per capita basis, real disposable income declined slightly in 1957.

The advance in consumer spending matched fairly closely the rise in disposable income, leaving the rate of personal saving only slightly lower than in the preceding year. Personal saving dropped to \$1,467,000,000 in 1957 from \$1,541,000,000 in 1956.

NATIONAL SAVING AND INVESTMENT

Gross national saving fell from \$6,219,000,000 in 1956 to \$6,063,000,000 in 1957. The sources of saving were considerably altered. The surplus on consolidated government account, which at \$379,000,000 represented a significant part of total saving in 1956, was reduced to \$52,000,000 in 1957. Savings in the form of undistributed profits were also lower. An increase in depreciation allowances acted as a partial offset to the reduction in the other forms of saving.

The sharply reduced rate of accumulation of inventories (which shifted downward by \$673,000,000) brought the level of total gross capital formation slightly below the 1956 level. However, in 1957 as in 1956, total national saving fell short of investment requirements and this deficiency was met from foreign sources. In both years the deficit on international current account amounted to about \$1,400,000,000, and this imbalance was chiefly financed by net inflows of capital for long-term investment.

GROSS NATIONAL SAVING AND INVESTMENT, 1957 COMPARED WITH 1956
(Billions of dollars)

Item	1956	1957	Change 1956 to 1957
Gross Private Saving—			
Personal saving.....	1.5	1.5	—
Undistributed corporation profits.....	1.0	0.8	-0.2
Depreciation allowances.....	3.5	3.7	+0.2 ¹
Other.....	-0.1	-0.1	-0.2
Government surplus.....	0.4	0.1	-0.3
Residual error.....	—	0.1	—
Gross National Saving.....	6.2 ¹	6.1	-0.1
Gross Capital Formation—			
Gross fixed capital formation.....	6.8	7.4	+0.6
Change in inventories.....	0.8	0.1	-0.7
Net foreign investment.....	-1.4	-1.4	—
Residual error.....	—	-0.1	0.1
Gross National Investment.....	6.2	6.1 ¹	-0.1 ¹

¹ Not exact, because of rounding of figures.

SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:—

. . figures not available.

... figures not appropriate or not applicable.

— nil or zero.

-- amount too small to be expressed or where “a trace” is meant.

^p preliminary figures.

^r revised figures.

CHAPTER I.—PHYSIOGRAPHY AND RELATED SCIENCES

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found on the facing page.

PART I.—GEOGRAPHY*

Canada comprises the greater part of the northern half of North America and lies between the United States, Alaska and Greenland. In longitude Canada extends from Cape Spear, Newfoundland, at 52°37'W, to Mount St. Elias, Yukon Territory, at 141°W, a distance of 88°23'. In latitude it stretches from Middle Island, Lake Erie, at 41°41'N, to the North Pole. The northernmost point of land is Cape Columbia on Ellesmere Island, at 83°07'N. Thus Canada is essentially a western and a northern country, a fact of increasing strategic significance. Moreover the climatic, vegetal and soil belts are drawn out into broad east-west zones, thereby supporting the east-west orientation of the main frontier of the country and aiding Canada's historic east-west development.

The shape of Canada is like a distorted parallelogram with its four corners making important salients. In the north the salient formed by the Arctic Archipelago, which penetrates deep into the Arctic basin, guards the northern approaches to the continent from Europe and Asia and makes Canada neighbour to the Union of Soviet Socialist Republics. In the south the salient of peninsular Ontario thrusts far into the heart of the United States. In the east the salient of Labrador and the Island of Newfoundland commands the shortest crossings of the North Atlantic Ocean and links Canada geographically with the United Kingdom and France. In the west the broad arc of land between

* Prepared by the Geographical Branch, Department of Mines and Technical Surveys, Ottawa.

Vancouver in southern British Columbia and Whitehorse in Yukon Territory provides the shortest crossings of the North Pacific Ocean between continental North America and the Far East. Canada thus stands at the crossroads of contacts with the principal powers and some of the most populous areas of the world.

In size, Canada is the largest country in the Western Hemisphere and the second largest country in the world. Its area of 3,851,113 sq. miles may be compared with that of the Union of Soviet Socialist Republics, 8,649,821 sq. miles,* the United States of America (including Alaska), 3,608,790 sq. miles,* and Brazil, 3,287,204 sq. miles.* It is more than forty times the size of the United Kingdom and eighteen times that of France. The immense size of the country, while encompassing many resources and seeming to afford much scope for settlement, imposes its own burdens and limitations, particularly because much of the land is mountainous and rocky or is under an arctic climate. The developed portion is probably not more than one-third of the total; the occupied farm land is only 7.7 p.c. and the currently accessible productive forested land 18.1 p.c. of the total. The population of Canada, estimated at 16,589,000 on June 1, 1957, may be compared with 165,271,000† for the United States (1955) and with 58,456,000† for Brazil (1955).

1.—Approximate Land and Freshwater Areas by Province and Territory

NOTE.—A classification of land area as agricultural, forested, etc., is given at p. 18.

Province or Territory	Land	Freshwater	Total	Percentage of Total Area
	sq. miles	sq. miles	sq. miles	
Newfoundland (incl. Labrador).....	143,045	13,140	156,185	4.1
Prince Edward Island.....	2,184	--	2,184	0.1
Nova Scotia.....	20,743	325	21,068	0.6
New Brunswick.....	27,473	512	27,985	0.7
Quebec.....	523,860	71,000	594,860	15.4
Ontario.....	333,835	78,747	412,582	10.7
Manitoba.....	211,775	39,255	251,030	6.5
Saskatchewan.....	220,182	31,518	251,700	6.5
Alberta.....	248,800	6,485	255,285	6.6
British Columbia.....	359,279	6,976	366,255	9.5
Yukon Territory.....	205,346	1,730	207,076	5.4
Northwest Territories.....	1,253,438	51,465	1,304,903	33.9
Franklin.....	541,753	7,500	549,253	14.3
Keewatin.....	218,460	9,700	228,160	5.9
Mackenzie.....	493,225	34,265	527,490	13.7
Canada.....	3,549,960	301,153	3,851,113	100.0

Section 1.—Physical Geography

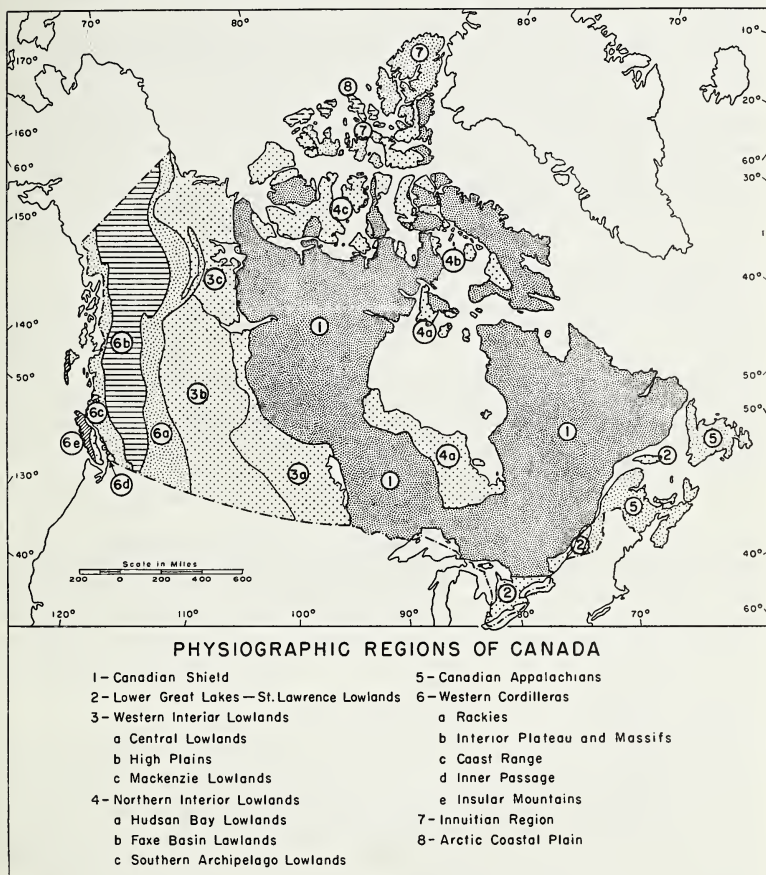
Subsection 1.—Physiographic Regions

Canada includes each of the major characteristic structures of the North American continent with the exception of the Atlantic coastal plain. Structure tends to dominate relief to a remarkable degree even though its effects have been modified by glacial and river erosion or deposition. Consequently, structural regions have become main physiographic divisions. Basically Canada consists of a central rocky upland, or shield, sloping down to flanking basins filled with sedimentary strata and rising again at the margins to mountains of folded rocks, interspersed with igneous intrusions.

* *United Nations Statistical Yearbook 1956.*

† *United Nations Population and Vital Statistics Reports, January 1957.*

Eight physiographic regions dominate the country: (1) The Canadian Shield; (2) the Lower Great Lakes-St. Lawrence Lowlands; (3) the Western Interior Lowlands of the Prairies and the Mackenzie basin; (4) the Northern Interior Lowlands of Hudson Bay and the southern Arctic Archipelago; (5) the Canadian Appalachians; (6) the Western Cordilleras; (7) the Arctic ranges, or Innuitian; and (8) the Arctic Coastal Plain.



The Canadian Shield.—The Canadian Shield, covering an area of about 1,850,000 sq. miles, or nearly one-half the country, is the core of the continent. Broad in the north, between Davis Strait and the Mackenzie basin, it tapers towards its southern extremity in Minnesota. Its eastern edge is tilted up to present the Torngat Mountains of Labrador and the mountains of Baffin Island, with heights of over 5,000 feet. The southern and western sides form much lower uplands, of from 600 to 1,200 feet. They are broken by faults and

end in a zone of lake-filled basins including the Great Lakes, Winnipeg, Athabasca, Great Slave and Great Bear Lakes. The north consists of a series of low prongs, like the Melville and Boothia peninsulas, flanked by channels and islands. The centre of the Shield has been depressed and is occupied by Hudson Bay and its arms and outlets. The whole makes up a knobby, rocky plateau with old worn-down mountains above and enclosed plains beneath its general level.

The rocks of the Shield comprise two series, the Archæan and Proterozoic, including very ancient sedimentaries, together with igneous intrusions and metamorphic belts. The Archæan rocks are dominantly crystalline in the form of massive domes of from 1,200 to 1,400 feet high; they also embrace small sedimentary depressions. The Proterozoic rocks are mainly sedimentary and often lie in wide, shallow basins, 600 feet or more below the surrounding uplands. The more important of these are the Coppermine, Thelon, Athabasca and Dubawnt plains in the northwest, the Port Arthur lowland in the southwest, and the Mistassini plain and Ungava trough in the east. The Proterozoics were frequently squeezed up into ranges of fold mountains such as the Bear and Snare Mountains south of Great Bear Lake, the Slave and Nonacho Mountains south of Great Slave Lake, the Athabasca and Tazin Mountains east of Lake Athabasca, the Cuyuna and Penokean Mountains to the north and south of Lake Superior, the La Cloche Mountains north of Lake Huron and the Ungava Mountains in central Labrador.

The Shield may be subdivided on the basis of changes in the trend of rocks from place to place. In the south there lies the Grenville province with an over-all trend from southwest to northeast. North of a line through Lake Nipissing and Lake Mistassini occurs the Superior province with a west-east trend. It extends north from Lake Superior to about the Nelson River west of Hudson Bay and Great Whale River east of the Bay. The Ungava province occupies the northeast, with a west-southwest to east-northeast trend. Its counterpart is the Churchill province between Lake Winnipeg and the Dubawnt plain, having a southwest to northeast trend. In the far northwest is the Slave province where the rocks trend from south-southwest to north-northeast.

The whole of the Shield has been glaciated. Current opinion favours Baffin Island and the high eastern rim of the Shield as the main source of ice; the ice sheets spread out, however, far to the west and south, pushing across to the Rockies practically to the confluence of the Mississippi and Ohio Rivers and to Long Island. The ice deepened pre-existing valleys, scooped out some of the softer plains, wore down ridges and spread quantities of debris. As it melted away it created huge frontal lakes such as the predecessors of the Great Lakes, of the western lakes, and of the various 'clay belts' that now occupy hollows in the Shield. These lakes left behind extremely valuable lacustrine clays and beach gravels that have given the Shield the few agricultural areas it possesses. Post-glacial rivers, too, have benefited from the ice-cut or ice-ponded lakes, obtaining a large volume and a steady flow that make them ideal for hydro-electric development.

Shield structures the world over are peculiarly favourable to metal formation. Thus the Canadian Shield is Canada's principal source of iron, gold, nickel and radioactive metals and has also important supplies of copper, lead and zinc. Recent strides made in the exploitation of these mineral deposits as well as in the development of the vast forest and water power resources of the area have attracted settlement as never before. The new communities afford important markets for the agricultural produce of the western provinces and the manufactured goods of Ontario and Quebec, and thus the resources of the Shield constitute a factor in cementing together the eastern and western portions of the country. In the north, however, climatic conditions and inaccessibility have prevented extensive colonization.

The Lower Great Lakes-St. Lawrence Lowlands.—Flanking the Shield to the south and southeast the Lowlands consist of gently dipping or almost flat strata of Palæozoic sediments. Laid down in epi-continental seas in beds of mud (shale), sand and limestone, these strata produced a belted lowland with distinctive though subdued relief. The belts

of shale form low vales and the belts of limestone stand up as prominent scarps, the most famous of which is the Niagara Escarpment. The whole region was greatly modified by ice and, as the ice melted, depressions became lakes. The glacial lakes were much larger than those of today. Glacial Lake Algonquin covered the three upper Great Lakes together with Lakes Nipigon and Nipissing and flowed out to sea by the Mattawa-Ottawa and the Trent river valleys. When it receded it left behind important plains at Port Arthur, Nipigon and North Bay. Lake Erie developed from a succession of glacial lakes at different levels and consequently is surrounded by a number of sandy deltaic deposits, beach ridges and lacustrine flats, each of which has its own role in diversifying agriculture. Lake Ontario is the successor to Lake Iroquois and is surrounded by the old Iroquois beach which stands out everywhere and provides sites for roads and settlements. Farther east, the lower Ottawa and St. Lawrence valleys were invaded first by glacial Lake Champlain and then by the Champlain Sea. Here also, deltaic sands, beach gravels and lake-bottom clays play a pronounced part in agriculture and in the distribution of settlement. The ice left large terminal or inter-lobate moraines, the most significant of which are the Horseshoe moraine in southwest Ontario and the Oak Ridge moraine in central Ontario. These provide catchment basins for many small rivers.

The Lowlands may be divided into four sub-regions: Southwest Ontario, west of the Niagara Escarpment; Central Ontario, between the Escarpment and the Rideau Hills [these are a spur of the Shield (the Frontenac axis) between the Algonquins and the Adirondacks]; Eastern Ontario and the Montreal Plain; and the estuarine plains of Quebec and Anticosti Island.

The Lowlands are poorly endowed with fuel and other mineral resources, except for the natural gas fields and the salt deposits of southwest Ontario. However, the area is the most southerly part of Canada, has a very favourable climate and good grey-brown soils, and is therefore very productive. The immense water power potential of the Niagara and St. Lawrence Rivers and of the rivers plunging down from the Shield and the Appalachians is a major asset. Although the Lowlands comprise Canada's smallest region, they support nearly two-thirds of the country's population.

The Western Interior (Prairies and Mackenzie) Lowlands.—The largest plains in Canada, the Western Interior Lowlands occupy a truly continental depression between the Shield and the Rocky Mountains, long the site of shallow seas that expanded and contracted from Palaeozoic to Cenozoic times. Sedimentary rocks laid down by rivers and by these seas in almost horizontal strata dominate the scene. They have since been attacked by differential erosion, the softer beds being worked down into basins and the harder beds standing up as intervening scarps.

The prairies have thus come to occupy three levels or steps. The lowest consists of the Manitoba plain, of Palaeozoic rocks, dipping gently away from the Shield. This step is at an elevation of from 600 to 900 feet. Much of it is floored by fertile glacial clays and beach ridges left by glacial Lake Agassiz that once filled the Red and Assiniboine Rivers and the flats around Lakes Winnipeg, Manitoba and Winnipegosis. It gives way, westward, to the great Cretaceous escarpment known as the Manitoba Scarp. This scarp has been cut into deeply by the Assiniboine, Swan and Saskatchewan Rivers and really exists as a series of uplands of from 1,600 to 2,600 feet high called the Turtle, Riding, Duck, Porcupine and Pasquia Mountains.

The second prairie step stretches westward from this scarp at a mean altitude of 2,000 feet. It too was glaciated. When the ice retreated large glacial lakes were left, known as Lakes Souris, Regina and Saskatoon. Lake-bed deposits today form some of the flattest and most fertile areas. Elsewhere the ground is rather hummocky with innumerable sloughs. Another great scarp occurs west of Weyburn and Moose Jaw; it is a continuation of the Missouri Coteau, a well-marked feature in the United States, and is divided by great re-entrants into individual sectors, the most important of which are Wood and Bear Mountains.

West of the Coteau extends the third and highest prairie step with an altitude of between 3,000 and 4,300 feet. In the south it is quite hilly, where the Cypress Hills rise above it to shed waters into the Saskatchewan or Missouri basins. Covered with till, it has generally a slightly rolling surface suited particularly to ranching. Old glacial lakes along the Bow and Oldman Rivers provide excellent agricultural areas, as do outwash plains in front of the moraines that occur between Calgary and Edmonton.

The three prairie steps are united by the great arms of the Saskatchewan River flowing from the Rockies to Lake Winnipeg, and also by the soil zones which form broad west-east arcs. Railways, roads and crop belts accentuate these natural ties. So do the coal, oil and gas fields. The prairies are underlain by Canada's chief fuel-bearing rocks. From Estevan through Drumheller to Macleod are a succession of coal fields. Southwest Manitoba and south Saskatchewan lie on the edge of the Williston oil basin. Western Alberta is the site of another large oil field. Gas is important in southern Alberta and in the Peace River district of the northwest.

A low divide of moraine-capped hills separates the prairies from the Mackenzie Lowland. This huge area, 1,100 miles long and up to 300 miles wide, consists of an asymmetrical plain, tilted from plateau-like levels in the west, at 4,000 feet, to basin-like stretches in the east, at 500 feet. The main channel follows the eastern depression. Long, rapid, deeply entrenched tributaries, such as the Athabasca, Peace, Liard, Arctic Red and Peel Rivers, come in from the west. Where the Lowland meets the Shield, a few pronounced hollows occur filled with great lakes. These were much larger during glacial times and consequently glacial-lake beds are exposed all around Lesser Slave, Athabasca, Great Slave and Great Bear Lakes; the more southerly of these areas provide reasonably good agricultural or forest lands. The Athabasca and Peace Rivers, emptying into glacial Lake Athabasca, formed extensive sand deltas; an even larger delta of this type is the one formed by the Slave River at Great Slave Lake. The Mackenzie delta is one of the largest on the continent.

Though the southern part of the Lowland, particularly in the Peace River district, forms good agricultural land, the northern part is climatically unsuited to commercial farming. The lead and zinc deposits at Pine Point and the oil field at Norman Wells, together with oil potential in the middle Mackenzie and Peel basins, are valuable northern assets.

The Northern Interior (Hudson Bay and Inner Arctic) Lowlands.—Palaeozoic sedimentaries, they dip gently north from the main height of land between the Hudson Bay and Great Lakes drainage basins. They are thus a parallel structure to that of the St. Lawrence Lowlands, but there the likeness ends. In the past, marine transgression buried the northern Palaeozoics, masking the effects of the underlying rocks. Much of the land, then, consists of great stretches of old marine beds sloping down from one raised beach to the other. Through these thrust occasional masses of drumlins and periodic outcrops of rock. Moreover, the climate is arctic and therefore vegetation is limited to grass, moss and lichen, and soil development is inhibited. Thus these northern plains are of little economic value except for some hunting and trapping.

The plains may be divided into four sub-regions: the coast plain of Hudson Bay, between Churchill and Moosonee; the southern part of Southampton Island, and Coats and Mansel Islands; most of the islands and parts of the coast of Foxe Basin; and parts of the southern Arctic Archipelago, including northwest Baffin, Somerset, Prince of Wales, eastern Victoria and eastern Banks Islands.

The Canadian Appalachians.—The Canadian Appalachians are a part of the great range of fold mountains extending from Newfoundland through the Maritimes and south-east Quebec to Tennessee and beyond the Mississippi to Arkansas. They were thrown up chiefly in Silurian, Devonian and Carboniferous times, thus involving Palaeozoic strata. In those times, two long geosynclines ran through the region—the Laurentian and the Acadian. The former extended from northwest Newfoundland through the Gaspé Peninsula and southeast Quebec, and gave birth to the Long Range of Newfoundland and the Shickshock

and Notre Dame Mountains of Quebec. The Acadian geosyncline reached from southeast Newfoundland through Nova Scotia and eastern New Brunswick and was responsible for the uplands of those regions.

Between the mountain ranges are wide basins floored by sandstone, notably those of Prince Edward Island, Minas basin, and the Annapolis and St. John Valleys. The whole complex mass of mountains was planed down by prolonged erosion so that elevation is moderate, not more than 4,200 feet, and outlines are long and smooth with few sharp crests. The name of the highest area, Tabletop Mountain in the Shickshocks, is indicative of the subdued topography. Subsequently the region was glaciated and small glacial lakes, valley moraines and outwash fans play a significant role in scenery and occupation. Raised beaches to a height of 250 feet line many stretches of coast and are marked by roads and settlements. The rivers have been strongly rejuvenated and are lined with terraces particularly valuable for cultivation. Intrusions of granite and trap are frequent. The trap sill forming North Mountain in Nova Scotia encloses the famous Annapolis Valley.

Many of the igneous intrusions are associated with metals, as at Bathurst in New Brunswick where large deposits of lead and zinc are found. At one time gold was mined about the intrusions in Nova Scotia. A large deposit of iron at Wabana and deposits of lead and zinc at Buchans, Newfoundland, are important. On the edge of the region, in the Eastern Townships of Quebec, is the world's largest supply of asbestos and significant deposits of coal occur in Cape Breton Island, Nova Scotia, and on the coasts of Northumberland Sound in New Brunswick. Thus, though the fertile plains of the sheltered basins included in the fold belts have long made the region predominantly agricultural, the mineral resources are the basis for limited but thriving industries. Lumbering on forestclad hills and fishing in the bays of a much-indented coast are also important activities of the region.

The Western Cordilleras.—The Western Cordilleras consist of a belt of lofty ranges, deep troughs and broad plateaux extending for 1,400 miles through the Yukon Territory and British Columbia and having a width of up to 500 miles. The Cordilleras are characterized by intensive folding, elevation and faulting, the intrusion of enormous batholiths—igneous masses that warped-up overlying sedimentaries—and by volcanic activity. They are made up, therefore, of folded sedimentaries, igneous masses and metamorphic rocks. Although older rocks are exposed, Mesozoic and Cenozoic rocks predominate. In Precambrian times the geosynclines formed in which the Yukon group of sediments in Yukon Territory and the Shuswap group in British Columbia were laid down. Later vast depressions occurred where sediments gathered that are now folded into the Purcells and southern Rockies. The accumulation of great depths of sediment, 20,000 feet or more thick, continued through Palæozoic into Mesozoic times. Then in Jurassic times violent volcanism, folding and the intrusion of granites occurred in the outer belts, throwing up the Coast and Selkirk Ranges. The Rocky Mountain system came into being during Cretaceous and Tertiary times.

The whole region was partly planed down and there is a frequent accordance of summit levels. However, subsequent uplift led to a renewed attack on the land by river and sea, and deeply entrenched rivers fringed by pronounced terraces are common. Glaciation has further deepened the valleys and eaten into the divides, leading to knife-like ridges and horn-shaped peaks. Eventual drowning of the coastal fringe made islands of outlying ridges and deep fjords of coastal troughs, producing a highly articulated shore line.

The Cordilleras may be divided into five structures—the Rocky Mountain system, the interior basins and plateaux, the Coast Range, the Inner Passage along the coast, and the outer insular arc.

The Rocky Mountain system begins, in Canada, with the Richardson Range of moderate elevation, heavily glaciated and then dissected by rivers on its flanks but with no marked peaks. Southwards is the Peel Plateau of flat sedimentary rocks, eaten into isolated tablelands by river action. Farther south occur the Mackenzie Mountains, with more intensively folded ridges and ice-serrated peaks rising to 9,000 feet. These are separated

from the Rockies proper by the pronounced gap of the Liard River. The Rockies are composed partly of highly folded beds and partly of nearly flat beds that have been uplifted to great heights. They are split by faults and have been attacked by rivers so successfully as to give way to low passes such as Finlay Forks, Pine, Yellowhead, Kicking Horse and Crowsnest. Three clusters of peaks occur, dominated by Churchill Peak (10,500 feet) in the north, Mount Robson (12,972 feet) in the centre and Mount Assiniboine (11,870 feet) in the south.

The interior basins and plateaux are considerably lower than the Rocky or Coast Ranges. On the east they begin at a well-marked break called, in part of its course, the Rocky Mountain Trench. This carries the headwaters of the Liard, Peace, Fraser and Columbia Rivers. The Yukon Plateau in the north, lying between Dawson and Selwyn Ranges, has flat summits separated by deeply cut rivers. Southward it passes to the Cassiar Mountains, strongly intruded with igneous masses. Thence the Stikine Plateau runs as far as the Skeena-Hazelton Ranges, which are again largely of intruded igneous rock. South of these is the Interior Upland of British Columbia, a wide area of flat-topped uplands from 3,000 to 4,000 feet high with deep, many-terraced rivers flowing between. The gorge of the Fraser River is one of the most spectacular in Canada. The river basins afford considerable fertile land for cultivation and the plateau tops provide excellent pasture. Toward the United States border are the Columbia Mountains, a complex system of folded and intruded rocks and fault-line depressions rich in minerals and with productive river and lake terraces.

The Coast Range has the highest peaks in Canada—Mount Logan (19,850 feet) in the Yukon Territory and Mount Waddington (13,260 feet) in British Columbia. The Canadian portion starts in the high, partly volcanic, partly folded mass of peaks known as the St. Elias Range. Here active glaciers have cut deep troughs and sharp ridges. South, the Coast Range has some large batholiths. The crystalline rocks have frequently become exposed by the very active erosion caused by heavy precipitation from oceanic airs. Consequently most of the Coast Range, despite its massive structure, consists of a saw-like series of sharp peaks and ridges.

The Inner Passage along the coast comprises the Georgia, Queen Charlotte and Hecate Straits. It is a continuation northward of the string of great depressions occurring in the United States, such as the Sacramento and Willamette Valleys, but it became drowned by the sea and there is little plain left. The mainland and island coasts rise very steeply to lofty mountains. The Passage has a very large number of arms, most of which are ice-cut fjords or fault depressions giving a highly indented shore. The outer insular arc is made up of outlying ridges that have become partially submerged under the sea, forming a number of hilly or mountainous islands enclosing small fertile basins. The Queen Charlotte group in the north and Vancouver Island in the south are the most important.

The Western Cordilleras are very complex in structure and consequently have a wide range of resources. In some of the narrow plains, sedimentary rocks are underlain by coal fields as at Fernie and Nanaimo in British Columbia and at Carmacks in the Yukon Territory. Oil is purported to lie under plateau sections in the Yukon. Gold made the Cariboo district of British Columbia and the Klondike area of Yukon Territory world-famous in their time but of greater importance are the large mineral masses usually associated with igneous intrusions, of which copper, lead and zinc are the most significant. To this wealth of metals, the Cordilleras add vast hydro-electric potential and dense, extensive coniferous forests. Agriculture is limited except on the Fraser delta and in one or two of the interior trenches.

The Innuitian Region and the Arctic Coastal Plain.—The Innuitian Region is an extensive belt of fold mountains 800 miles long, involving rocks from Silurian to Cretaceous times. Folding started in Appalachian times in Silurian and Devonian beds. It overlapped that of the Cordilleras in Cretaceous and Cenozoic beds. Two sub-regions exist—the Ellesmere Island system and the Parry Islands folded belt. The Ellesmere Island system seems to indicate a double orogeny, in Silurian and then again in Cretaceous times.

The results have been fairly high ranges of from 6,000 to 10,000 feet where folding and thrust faulting are much in evidence. The trends of the folds are from southwest to northeast. The Parry Islands fold belt, trending more nearly west-east, consists of typical Appalachian-like folds in canoe-shaped structures about 2,000 feet high which include large tracts of horizontal strata.

Farther north, in the Sverdrup Islands and in those discovered by Stefansson, the strata form a coastal plain gently sloping towards the Arctic Ocean. The beds are much disturbed locally by piercement domes which are frequently the sites of the accumulation of pools of oil. However, geological discovery has not yet proceeded to the extent of determining the mineral wealth of the area. The climate is so severe that it precludes any possibility of agricultural development and has limited even hunting and fishing activities.

Subsection 2.—Inland Waters

The inland waters of Canada (not including salt water areas that are a part of Canada) are extensive, constituting over 7 p.c. of the total area of the country. They are best studied by segregating the main drainage basins as shown in Table 2.

2.—Drainage Basins

Drainage Basin	Area Drained ¹	Drainage Basin	Area Drained ¹
	sq. miles		sq. miles
Atlantic Basin	695,370¹	Arctic Basin (mainland)	944,280
Ontario.....	116,000	Saskatchewan.....	46,650
Quebec.....	372,780	Alberta.....	158,110
Newfoundland.....	155,360 ¹	British Columbia.....	105,020
New Brunswick.....	27,980 ¹	Yukon.....	53,970
Nova Scotia.....	21,070 ¹	Northwest Territories.....	580,530
Prince Edward Island.....	2,180 ¹		
Hudson Bay Basin	1,160,420	Pacific Basin	387,210
Quebec.....	199,230	British Columbia.....	251,990
Ontario.....	259,810	Yukon.....	135,220
Manitoba.....	243,780		
Saskatchewan.....	189,620	Gulf of Mexico Basin	8,600
Alberta.....	86,530	Alberta.....	2,540
Northwest Territories.....	181,450	Saskatchewan.....	6,060

¹ Areas are approximate and are exclusive of those portions of the basins of all rivers that lie in United States territory, and of areas of interior drainage.

During the early period of exploration and development the waterways of Canada were the sole means of access to and travel in the interior. This function is still of importance to much of the country, particularly in the north where most traffic moves by water or by air. In the settled areas, however, the construction of roads and railways has reduced the role of the waterways as transportation routes but they have assumed other functions. Some, particularly in the Canadian Shield area and the Cordilleran region, have been harnessed for the production of electric power. Others, mainly in southern Alberta and Saskatchewan, have been dammed to provide water for irrigation purposes. In Eastern Canada many of the rivers have been controlled in an over-all program of flood prevention and conservation of renewable resources or to provide dependable supplies of water for industrial and domestic purposes.

In Eastern Canada, the Great Lakes and St. Lawrence drainage basin dominates all others and forms an unequalled system of navigable inland waterways through a region rich in natural and industrial resources. From Duluth, Minn., at the head of Lake Superior

to Belle Isle at the entrance to the Gulf of St. Lawrence the distance is 2,280 miles. The St. Lawrence waterway and its tributaries, most of which have lakes available for reservoiring, have very large developed and potential power resources.

The greater part of Canada drains into Hudson Bay and the Arctic Ocean; the Nelson River drainage is exceptional in running *through* the most arable and the most settled part of Western Canada but otherwise the rivers of the West, east of the Rockies, run *away* from the settled areas towards the cold northern salt waters and this adversely affects their industrial utility. The Mackenzie River, which drains Great Slave Lake, is, with its headwaters, the longest river in Canada (2,635 miles) and its valley constitutes the natural transportation route through the Northwest Territories to the Arctic Ocean. From Fort Smith on the Slave River large river boats run without any obstruction to Aklavik on the delta of the Mackenzie, a distance of 1,292 miles. Table 3 gives the lengths of the principal rivers with their tributaries classified according to the four major drainage basins.

3.—Lengths of Principal Rivers and Their Tributaries

NOTE.—In this table the tributaries and sub-tributaries are indicated by indentation of the names. Thus the Ottawa and other rivers are shown as tributary to the St. Lawrence, and the Gatineau and other rivers as tributary to the Ottawa.

Drainage Basin and River	Length miles	Drainage Basin and River	Length miles
Flowing into the Atlantic Ocean		Flowing into Hudson Bay	
St. Lawrence (to head of St. Louis, Minn.)	1,900	Nelson (to head of Bow)	1,600
Ottawa	696	Saskatchewan (to head of Bow)	1,205
Gatineau	240	South Saskatchewan	865
du Lièvre	205	Red Deer	385
Coulonge	135	Bow	315
Madawaska	130	Belly	180
Rouge	115	North Saskatchewan	760
Mississippi	105	Red (to head of Sheyenne)	545
Petawawa	95	Assiniboine	590
South Nation	90	Souris	450
Dumoine	80	Qu'Appelle	270
North	70	Winnipeg (to head of Firesteel)	475
North Nation	60	English	330
Saguenay (to head of Peribonca)	475	Churchill	1,000
Peribonca	280	Beaver	305
Mistassini	185	Koksoak (to head of Kaniapiskau)	660
Ashuapmucuan	165	Kaniapiskau	575
St. Maurice	325	Severn (to head of Black Birch)	610
Mattawin	100	Albany (to head of Cat)	610
Manicouagan (to head of Racine-de-Bouleau)	310	Dubawnt	580
Outardes	270	Eastmain	510
Bersimis	240	Fort George (to Nicheun Lake)	480
Richelieu	210	Attawapiskat	465
St. Francis	165	Kazan	455
Chaudière	120	Nottaway (to head of Waswanipi)	400
Via the Great Lakes—		Waswanipi	190
French (to head of Sturgeon)	180	Nelson (to head of Lake Winnipeg)	400
Sturgeon	110	Rupert	380
Grand	165	Red (to head of Lake Traverse)	355
Thames	163	George (to Hubbard Lake)	345
Spanish	153	Moose (to head of Mattagami)	340
Trent	150	Abitibi	340
Mississagi	140	Mattagami	275
Nipigon (to head of Ombabika)	130	Missinabi	265
Moir	60	Hayes	300
Thessalon	40	Winisk	295
St. John	418	Whale	270
Romaine	270	Harrieanaw	250
Natashquan	241	Great Whale	230
Moisie	210	Leaf	165
Hamilton	208		
Exploits	153		
Naskaupi	152		
Canairiktok	139		
Eagle	138		
Miramichi	135		
Marguerite	130		
Gander	102		
		Flowing into the Pacific Ocean	
		Yukon (mouth to head of Nisutlin)	1,979
		Yukon (Int. Boundary to head of Nisutlin)	714
		Porcupine	590
		Lewes	338

3.—Lengths of Principal Rivers and Their Tributaries—concluded

Drainage Basin and River	Length	Drainage Basin and River	Length
	miles		miles
Flowing into the Pacific Ocean—concluded		Flowing into the Arctic Ocean	
Yukon—concluded		Mackenzie (to head of Finlay).....	2,635
Pelly.....	330	Peace (to head of Finlay).....	1,195
Stewart.....	320	Finlay.....	250
Macmillan.....	200	Smoky.....	245
White.....	185	Little Smoky.....	185
Columbia (total).....	1,150	Parsnip.....	145
Columbia (in Canada).....	459	Athabasca.....	765
Kootenay (total).....	407	Pembina.....	210
Kootenay (in Canada).....	276	Liard.....	755
Fraser.....	850	South Nahanni.....	350
Thompson (to head of North Thompson)....	304	Petitot.....	295
North Thompson.....	210	Fort Nelson.....	260
South Thompson (to head of Shuswap)....	206	Hay.....	530
Nechako.....	287	Peel (to head of Ogilvie).....	425
Stuart (to head of Driftwood).....	258	Arctic Red.....	310
Chilcotin.....	146	Slave.....	258
West Road (Blackwater).....	141	Twitya.....	200
Skeena.....	360	Back.....	605
Bulkley (to head of Maxam Creek).....	160	Coppermine.....	525
Stikine.....	335	Anderson.....	430
Aisek.....	260	Horton.....	275
Nass.....	236		

The outstanding lakes of Canada are the Great Lakes, though only parts of these are in Canadian territory. The International Boundary between Canada and the United States passes through Lakes Superior, Huron, St. Clair, Erie and Ontario. Details are given in Table 4.

4.—Elevations, Areas and Depths of the Great Lakes

Lake	Elevation Above Sea-level	Length	Breadth	Maximum Depth	Total Area	Area on Canadian Side of Boundary
	ft.	miles	miles	ft.	sq. miles	sq. miles
Superior.....	602.23	383	160	1,302	31,820	11,200
Michigan (U.S.A.).....	580.77	321	118	923	22,400	—
Huron.....	580.77	247	101	750	23,010	13,675
St. Clair.....	575.30	26	24	23	460	270
Erie.....	572.40	241	57	210	9,940	5,094
Ontario.....	245.88	193	53	774	7,540	3,727

There are no tides in the Great Lakes although considerable variation in water levels is occasioned by strong winds.

Other large lakes of Canada, ranging in area from 9,000 to 12,000 sq. miles, are Lake Winnipeg, Great Slave Lake and Great Bear Lake. Apart from these, notable for size, are innumerable lakes scattered over that major portion of Canada lying within the Canadian Shield. In an area of 6,094 sq. miles, accurately mapped, south and east of Lake Winnipeg, there are 3,000 lakes. In an area of 5,294 sq. miles, accurately mapped, southwest of Reindeer Lake in Saskatchewan, there are 7,500 lakes.

5.—Elevations and Areas of Principal Lakes by Province

NOTE.—Areas given are for mean water levels. For those reservoirs and lakes for which two elevations are given, HW means high water, LW low water, and N normal level.

Province and Lake	Elevation	Area	Province and Lake	Elevation	Area
	ft.	sq. miles		ft.	sq. miles
Newfoundland—			Ontario—concluded		
Deer.....	12	24	Minnitaki.....	1,177	72
Gander.....	86	49	Nipigon.....	852	1,870
Grand.....	270	140	Nipissing.....	643	330
Melville.....	sea-level	1,133	Ontario (total, 7,540) part.....	246	3,727
Michikamau.....	1,650	566	Rainy (total, 345) part (reservoir).....	HW 1,108	
Red Indian.....	500	65		LW 1,103	275
Victoria.....	700	15	Red.....	1,157	69
Nova Scotia—			St. Clair (total, 460) part.....	575	270
Bras d'Or.....	tidal	360	St. Francis, River St. Lawrence (total, 83) part.....	LW 151	20
New Brunswick—				N 153	
Grand.....	tidal	65	St. Joseph.....	1,219	187
Quebec—			Sandy.....	1,190	270
Abitibi (total, 350) part.....	868	55	Seul (reservoir).....	HW 1,172	
Albanel.....	1,289	145		LW 1,156	530
Baskatong (reservoir).....	HW 732	109	Simcoe.....	718	280
	LW 677		Stout, Berons River.....	1,039	50
Bienville.....	1,203	392	Sturgeon, English River.....	1,342	110
Burnt (Brûlé).....	1,155	56	Superior (total, 31,820) part.....	602	11,200
Cabonga (reservoir) (Kakabonga).....	LW 1,169	66	Timagami.....	962	90
Champlain (total, 360) part.....	95	18		HW 593	55
Chibougamau.....	1,253	138		N 584	
Clearwater.....	790	410	Timiskaming (total, 110) part.....	1,294	156
d'Iberville.....	612	260	Trout, English River.....	1,294	215
Evans.....	660	180	Trout, Severn River.....	1,062	
Goëland.....	125	125	Woods, Lake of the (total, 1,485) part (reservoir).....	LW 1,056	953
Indian House.....	125	125	Manitoba—		
Kaniapiskau.....	1,850	210	Athapapuskow.....	951	104
Kempt.....	1,372	63	Atikameg.....	855	112
Kipawa.....	884	95	Beaverhill.....	651	70
Lower Seal.....	860	130	Cedar.....	829	537
Manicouagan.....	110	110	Cormorant.....	840	134
Manuan.....	1,340	100	Cross Nelson River.....	679	274
Maricourt.....	110	110	Dauphin.....	853	200
Mattagami.....	615	88	Dog.....	815	64
Minto.....	485	88	Etawnei.....	28	
Mistassini.....	1,243	840	Gods.....	585	319
Nichikun.....	1,760	150	Goose.....	935	53
Olga.....	635	50	Granville.....	850	181
Payne.....	230	230	Island.....	744	550
Pipmakan.....	90	90	Kamuchawie (total, 56) part.....	1,153	30
Pletipi.....	138	138	Kipahigan (total, 59) part.....	963	29
Quinze, des.....	HW 867	55	Kiskitto.....	696	65
	N 857		Kiskittogisu.....	709	99
St. Francis, River St. Lawrence (total, 83) part.....	LW 151	63	Kississing.....	920	141
	N 153		Manitoba.....	813	1,817
St. John.....	321	375	Molson.....	838	154
	LW 65		Moose.....	873	8
St. Louis.....	N 67	57	Namew (total, 79) part.....	873	
	LW 11	130	Northern Indian.....	725	150
St. Peter.....	856	59	Nueltin (total, 336) part.....	612	76
Simard.....	593	55	Oxford.....	615	155
Timiskaming (total, 110) part.....	N 584		Paint.....	615	54
	72	63	Pelican, west of Lake Winnipegosis.....	837	80
Two Mountains.....	680	75		711	257
Waswanipi.....			Red Deer, west of Lake Winnipegosis.....	862	86
Ontario—				911	78
Abitibi (total, 350) part.....	868	295	Reed.....	1,150	386
Dog.....	1,378	61	Reindeer (total, 2,444) part.....	798	125
Eagle.....	1,192	137	St. Martin.....	737	49
Erie (total, 9,940) part.....	572	5,094	Setting.....	598	201
Huron, including Georgian Bay (total, 23,010) part.....	581	13,675	Sipiwek.....	915	73
Kesagami.....	90	90	Sisipuk (total, 99) part.....	835	1,060
La Croix (total, 55) part.....	1,181	25	Southern Indian.....	75	
Long.....	1,025	75	Stevenson.....	849	100
Manitou, Kenora.....	1,215	60	Swan.....	845	72
Mille Lacs, Lac des.....	1,491	102	Talbot.....	156	
			Todatara (total, 241) part.....	1,121	62
			Walker.....	829	90
			Waterhen.....		

5.—Elevations and Areas of Principal Lakes by Province—concluded

Province and Lake	Elevation	Area	Province and Lake	Elevation	Area
	ft.	sq. miles		ft.	sq. miles
Manitoba—concluded			British Columbia—concluded		
Wekusko.....	840	64	Babine.....	2,330	194
Winnipeg.....	713	9,004	Chilko.....	3,842	75
Winnipegosis.....	831	2,086	Eutsuk.....	2,817	96
Woods, Lake of the (total, 1,485) part (reservoir).	HW 1,062 LW 1,056	69	François.....	2,345	91
			Harrison.....	34	87
			Kootenay.....	1,741	168
Saskatchewan—			Kotcho (unsurveyed and esti- mated).....		90
Amisk.....	964	168	Lower Arrow.....	1,379	59
Athabasca (total, 3,058) part.....	699	2,165	Okanagan.....	1,123	136
Besnard.....	1,294	72	Ootsa.....	2,666	50
Black Birch.....	1,517	54	Quesnel.....	2,375	100
Candle.....	1,620	56	Shuswap.....	1,137	120
Canoe.....	1,415	78	Stuart.....	2,225	139
Churchill.....	1,382	213	Tagish (total, 138) part.....	2,148	93
Cold (total, 136) part.....	1,756	36	Takla.....	2,270	102
Cree.....	1,541	446 ^r	Teslin (total, 161) part.....	2,250	65
Cumberland.....	871	93	Upper Arrow.....	1,395	88
Deschambault.....	1,072	209			
Doré.....	1,506	248	Northwest Territories—		
Île-à-la-Croise.....	1,379	165	Aberdeen.....	130	475
Kamuchawie (total, 56) part.....	1,153	26	Artillery.....	1,190	207
Kipahigan (total, 59) part.....	963	30	Aylmer.....	1,230	340
La Plonge.....	1,476	90	Baker.....	30	975
La Ronge.....	1,198	450	Clinton-Colden.....	1,226	253
Last Mountain.....	1,608	89	Dubawnt.....	500	1,600
Loche, la.....	1,459	70	Faber.....	753	163
Montreal.....	1,608	162	Franklin.....		175
Namew (total, 79) part.....	873	71	Garry.....		980
Nemebien.....	1,259	63	Gras, de.....	1,300	345
Peter Pond.....	1,382	302	Great Bear.....	391	12,000
Primrose (total, 181) part.....	1,964	173	Great Slave.....	495	11,170
Quill.....	1,704	236	Hardisty.....	699	107
Reindeer (total, 2,444) part.....	1,150	2,058	Hottah.....		377
Riou.....		75	Kaminuriak.....	320	360
Sisipuk (total, 99) part.....	915	26	Macedougall.....		265
Smoothstone.....	1,572	110	Mackay.....	1,415	250
Snake.....	1,262	159	Maguse.....		540
Tazin.....	1,130	156	Marian.....	495	90
Wollaston.....	1,300	796 ^r	Martre, la.....		685
			Nueltn (total, 336) part.....		260
Alberta—			Nutarawit.....		350
Athabasca (total, 3,058) part.....	699	893	Pelly.....		331
Beaverhill.....	2,202	80	Point.....		295
Biche, la.....	1,784	94	Rae.....	748	74
Buffalo.....	2,566	56	Schultz.....	115	110
Calling.....	1,947	55	Tholintoe.....		160
Claire.....	699	545	Todatara (total, 241) part.....		85
Cold (total, 136) part.....	1,756	100	Yathkyed.....	300	860
Lesser Slave.....	1,893	461			
Mamawi.....	699	64	Yukon Territory—		
Peerless.....	2,267	75	Aishihik.....		107
Primrose (total, 181) part.....	1,964	8	Atlin (total, 308) part.....	2,200	1
Sullivan (variable).....	2,652	62	Kluane.....	2,500	184
Utikuma.....	2,105	85	Kusawa.....	2,565	56
			Laberge.....	2,100	87
British Columbia—			Tagish (total, 138) part.....	2,148	45
Adams.....	1,334	52	Teslin (total, 161) part.....	2,250	96
Atlin (total, 308) part.....	2,200	307			

Subsection 3.—Coastal Waters

The coastline of Canada, one of the longest of any country in the world, comprises the following estimated milages:—

Mainland—

Atlantic, 6,110; Pacific, 1,580; Hudson Strait, 1,245; Hudson Bay, 3,155; Arctic, 5,770; total, 17,860 miles.

Islands—

Atlantic, 8,680; Pacific, 3,980; Hudson Strait, 60; Hudson Bay, 2,305; Arctic, 26,785; total, 41,810 miles.

A comprehensive description of the coastal waters of Canada would require information from sciences such as oceanography, marine biology and meteorology. However, the basic factor in any study of the oceanic-continental margin is the physical relief of the sea floor and the scope of the information presented here is therefore restricted to this and a few salient features of the Atlantic, Arctic and Pacific marginal seas surrounding Canada. Further details are given in the 1947 Year Book, pp. 3-12.

Atlantic.—Along this coastal area, the sea has inundated valleys and lower parts of the Appalachian Mountains as well as those of the Canadian Shield. The submerged Continental Shelf, protruding seaward from the shore, effects the transition from continental to oceanic conditions. This Shelf is distinguished by great width and diversity of relief. From the coast of Nova Scotia its width varies from 60 to 100 miles, from Newfoundland 120 to 50 miles (at the entrance of Hudson Strait), and northward it merges with that of the Arctic Ocean. The outer edge of the Shelf, known as the Continental Shoulder, is of varying depths of from 100 to 200 fathoms before the Shelf suddenly gives way to the steep declivity leading to abyssal depths. The over-all gradient of the Atlantic Continental Shelf is slight but the whole area is studded with shoals, plateaux, banks, ridges and islands and the coasts of Nova Scotia and Newfoundland are rugged and fringed with islets and shoals. Off Nova Scotia the 40-fathom line lies at an average of 12 miles from the shore and constitutes the danger line for coastal shipping. The whole floor of the marginal sea appears to be traversed by channels and gullies cutting well into the Shelf.

The main topographical features of the Atlantic marginal sea floor are attributed to glacial origin but land erosion is an important factor. Eroded materials are carried seaward by rivers, ice and wind, and wave action against cliffs and shore banks washes away enormous masses that are deposited over the surrounding sea floor. The topography of the continental sea floor is therefore constantly changing and navigation charts of Canada's eastern seaboard must be continuously revised.

Arctic.—The submerged plateau protruding from the northern coast of North America is a major part of the Great Continental (or Polar) Shelf surrounding the Arctic Ocean on which lie all the Arctic islands of Canada, Iceland, Greenland and most of those of Europe and Asia. This Shelf develops its maximum width on the 80th meridian of west longitude where it extends from the south of James Bay to the north coast of Ellesmere Island, a distance of over 2,000 miles.

The floor topography of this continental margin is largely unexplored but sufficient has been charted to indicate an abrupt break at the northern oceanward edge. This steep continental terrace borders the whole western side of the Canadian Archipelago and constitutes one of the most striking and significant features of the Polar regions. From this declivity, deep well-developed troughs cut by glaciers enter between the western group of islands. A ridge across Davis Strait on which the depth is about 200 fathoms separates this basin from the open Atlantic.

Hudson Bay and Hudson Strait bite deeply into the continent. Hudson Bay is an inland sea 250,000 sq. miles in area having an average depth of about 70 fathoms; the greatest charted depth in the centre of the Bay is 141 fathoms.

Hudson Strait separates Baffin Island from the continental coast and connects Hudson Bay with the Atlantic Ocean. It is 430 miles long and from 37 to 120 miles wide and its greatest charted depth of 481 fathoms is close inside the Atlantic entrance. Great irregularities of the sea floor are indicated but, except in inshore waters, few navigation hazards have been located.

Pacific.—The marginal sea of the Pacific differs strikingly from the other marine zones of Canada. The hydrography of British Columbia is characterized by bold, abrupt relief—repetition of the mountainous landscape. Numerous inlets penetrate the mountainous coast for distances of 50 to 75 miles. They are usually a mile or two in width and of considerable depth, with steep canyon-like sides. From the islet strewn coast, the Continental Shelf extends from 50 to 100 sea miles to its oceanward limit where depths of

about 200 fathoms are found. There the sea floor drops rapidly to the Pacific Deep, parts of the western slopes of Vancouver Island and the Queen Charlotte Islands lying only four miles and one mile respectively from the edge of the declivity. These great detached land masses are the dominant features of the Pacific marginal sea. As is to be expected in a region so irregular in hydrographic relief, shoals and pinnacle rocks are numerous, necessitating cautious navigation.

Subsection 4.—Islands

The largest islands of Canada are in the north and all experience an Arctic climate. The northern group extends from the islands in James Bay to Ellesmere Island which reaches 83°07'N. Those in the District of Franklin lie north of the mainland of Canada and are generally referred to as the Canadian Arctic Archipelago; those in the extreme north—lying north of the M'Clure Strait-Viscount Melville Sound-Barrow Strait-Lancaster Sound water passage—are known as the Queen Elizabeth Islands.

On the West Coast, Vancouver Island and the Queen Charlotte Islands are the largest and the most important but the coastal waters are studded with many small rocky islands.

The Island of Newfoundland forming part of the Province of Newfoundland, the Province of Prince Edward Island, Cape Breton Island forming part of the Province of Nova Scotia, Grand Manan and Campobello Islands forming part of the Province of New Brunswick and Anticosti Island and the Magdalen group included in the Province of Quebec are the chief islands off the East Coast.

Notable islands of the inland waters include Manitoulin Island (1,068 sq. miles in area) lying in Lake Huron, the so-called Thirty Thousand Islands of Georgian Bay and the Thousand Islands in the outlet from Lake Ontario into the St. Lawrence River.

6.—Islands over 2,000 Square Miles in Area

Island	Area	Island	Area
	sq. miles		sq. miles
Arctic Ocean—		Arctic Ocean—concluded	
Baffin.....	183,810*	Prince Charles.....	3,500
Ellesmere.....	82,119	Cornwallis.....	2,670
Victoria.....	81,930	Amund Ringnes.....	2,515
Banks.....	23,230		
Devon.....	20,861	Atlantic Ocean—	
Melville.....	16,141	Newfoundland.....	42,734
Axel Heiberg.....	15,779	Cape Breton.....	3,970
Southampton.....	15,700	Anticosti (Gulf of St. Lawrence).....	3,043
Prince of Wales.....	12,830	Prince Edward.....	2,184
Somerset.....	9,370		
Prince Patrick.....	6,081	Pacific Ocean—	
Bathurst.....	6,041	Vancouver.....	12,408
Ellef Ringnes.....	5,139		
King William.....	4,870		
Bylot.....	4,200		

Subsection 5.—Mountains and Other Heights

The predominant orographical feature in Canada is the Great Cordilleran Mountain System which contains many peaks over 10,000 feet in height. The highest peak in Canada is Mount Logan in the St. Elias Mountains of Yukon Territory, which rises 19,850 feet above sea level. The highest elevations in all parts of the country are shown in Table 7 in feet above mean sea level.

7.—Principal Heights in each Province and Territory

Province and Heights	Elevation	Province and Heights	Elevation
	ft.		ft.
Newfoundland		Manitoba	
Long Range—		Duck Mountain.....	2,600
Gros Morn.....	2,666	Porcupine Mountain.....	2,500
Mount Blowmedown.....	2,502	Riding Mountain.....	2,000
Mount St. Gregory.....	2,338		
Gros Paté.....	2,115	Saskatchewan	
Blue Mountains.....	2,085	Cypress Hills (Summit).....	4,243
Table Mountain.....	1,700	Wood Mountain (West Summit).....	3,371
Blue Hills of Coteau—		Wood Mountain (East Summit).....	3,347
Peter Snout.....	1,690	Vermillion Hills.....	2,255
Butter Pott.....	950		
Red Hill.....	700	Alberta	
Central Highlands—		Rockies—	
Maintopsail.....	1,800	Columbia.....	12,294
Missentopsail.....	1,761	The Twins ²	12,085
Torngats—		Forbes.....	11,902
Cirque Mountain.....	6,500	Alberta.....	11,874
Mount Eliot.....	4,550	Assiniboine.....	11,870
Mount Tetragona.....	4,510	The Twins ²	11,675
Mount Razorback.....	3,660	Temple.....	11,636
Mount Sir Donald.....	1,950	Kitchener.....	11,500
Cape Chidley.....	1,500	Diadem.....	11,500
Kaumajets—		Lyell.....	11,495
Bishop's Mitre.....	3,500 ¹	Athabasca.....	11,452
		Hungabee.....	11,447
Nova Scotia		King Edward.....	11,400
Ingonish Mountain.....	1,392	Stutfield.....	11,400
Creignish Hills (at Creignish).....	850	Brazee.....	11,356
Cobequid Mountains (at E Mapleton).....	840	Victoria.....	11,355
North Mountain (4 miles NE of Annapolis).....	590	Snow Dome.....	11,340
South Mountain (at Annapolis).....	515	Joffre.....	11,316
		Murchison.....	11,300
New Brunswick		Deltaform.....	11,225
Mount Carleton.....	2,690	Lefroy.....	11,220
Green River Mountain.....	1,600	Alexandra.....	11,214
Moose Mountain.....	1,490	Sir Douglas.....	11,174
		Woolley.....	11,170
Quebec		Lunette.....	11,150
Appalachians—		Hector.....	11,135
Mount Jacques Cartier (Shickshocks).....	4,160	Clearwater.....	11,044
Mount Richardson.....	3,885	Edith Cavell.....	11,033
Barn Mountain.....	3,775	Fryatt.....	11,026
Mount Logan.....	3,700	Coleman.....	11,000
Mount Magnetic.....	3,625	Wilson.....	11,000
Mount Albert.....	3,550	Eiffel Park.....	10,091
Mount Bayfield.....	3,470	Pinnacle Mountain.....	10,061
Mount Mattawa.....	3,370	Mount Rundle.....	9,665
Roundtop Mountain (Sutton Mountains).....	3,175	Mount Eisenhower.....	9,030
Mount Orford.....	2,860	Three Sisters.....	8,840
Mount Hereford.....	2,760	Mount Edith.....	8,370
Pinnacle Mountain.....	2,150		
Mount Brome.....	1,725	British Columbia	
Mount Shefford.....	1,725	Coast Range—	
Shield—		Waddington.....	13,260
Mount Tremblant (Laurentian Mountains).....	3,150	Tiedemann.....	12,000
Mount Ste. Anne (Laurentian Mountains).....	2,625	Tatlow.....	10,050
Montereian Hills—		Skihst.....	9,660
Mount St. Hilaire.....	1,350	Crown.....	4,708
Mount Yamaska.....	1,275	Selkirk—	
Rougemont.....	1,250	Sir Sandforth.....	11,342
Mount Johnson.....	725	Dawson.....	11,123
Mount Royal.....	700	Hasler.....	11,113
		Dolphine.....	11,076
Ontario		Huber.....	11,041
Tip Top Hill.....	2,120	Wheeler.....	11,023
Bathawana Mountain.....	2,100	Selwyn.....	11,013
Niagara Escarpment—		Adamant.....	10,980
Oster Bluff.....	1,700	Grand.....	10,832
Caledon Mountain.....	1,400	Mount Sir Donald (Sir Donald Range).....	10,808
Blue Mountains.....	1,400	Nelson.....	10,772
High Hill.....	1,150	Inoclast.....	10,646
Mount Nemo.....	1,000	Rogers Park (Hermit Range).....	10,536
		Rockies—	
		Robson.....	12,972
		Clemenceau.....	12,001

¹ Approximate.² One of two peaks.

7.—Principal Heights in each Province and Territory—concluded

Province and Heights	Elevation	Territory and Heights	Elevation
British Columbia—concluded	ft.	Yukon Territory	ft.
Rockies—concluded		St. Elias Mountains—	
Goodsir.....	11,676	Logan.....	19,850
Bryce.....	11,507	St. Elias.....	18,008
Chown.....	11,500	Lucania.....	17,150
Resplendent.....	11,240	King.....	17,130
King George.....	11,226	Steele.....	16,439
Consolation.....	11,200	Wood.....	15,880
The Helmet.....	11,160	Vancouver.....	15,700
Whitehorn.....	11,101	Hubbard.....	14,950
Geikie.....	11,016	Walsh.....	14,780
Bush.....	11,000	Alverstone.....	14,500
Sir Alexander.....	11,000	McArthur.....	14,400
Freshfield.....	10,945	Augusta.....	14,070
Mummery.....	10,918	Strickland.....	13,818
Vaux (Vermillion Range).....	10,881	Newton.....	13,811
Ball.....	10,865	Cook.....	13,760
Churchill.....	10,500	Craig.....	13,250
Stephen.....	10,485	Badham.....	12,625
Cathedral.....	10,454	Malaspina.....	12,150
Storm.....	10,372	Jeannette.....	11,700
Gordon.....	10,346	Baird.....	11,375
President.....	10,287	Seattle.....	10,070
Odaray.....	10,165		
Laussedat.....	10,015		
Mount Burgess.....	8,463		
St. Elias Mountains—		Northwest Territories	
Fairweather.....	15,287	Franklin Mountains—	
Root.....	12,860	Delthore.....	6,800
Monashee—		Clark Mountain.....	3,000
Mount Begbie.....	8,946		to 4,000
Vancouver Island Range—		Mount Rawlinson.....	5,000
Mount Albert Edward.....	6,968	Nelson Head.....	1,000
Mount Arrowsmith.....	5,976	Mount Pelly.....	675

Section 2.—Main Physical and Economic Features of the Provinces

Politically Canada is divided into ten provinces and two territories. Each of the provinces is sovereign in its own sphere, to the extent set out in the British North America Act 1867 and its amendments, and as new provinces have been organized they have been granted political status equivalent to that of the original provinces. The Yukon and Northwest Territories, with their present boundaries, are administered by the Federal Government. The chief physical and economic features of each of the provinces and of the territories are described in the 1956 Canada Year Book at pp. 12-17. Details of resources and their development are given in later chapters of the present volume.

PART II.—LAND RESOURCES AND PUBLIC LANDS

Section 1.—Land Resources

Information currently available regarding Canada's vast land resources is shown in Table 1, where the land area is classified as occupied agricultural, forested and 'other' land, the latter including urban land, road allowances, grass and brush land and all waste land such as open muskeg, swamp and rock. Soil surveys now under way by the Department of Agriculture will make it possible in the future to estimate the amount of arable land Canada possesses and, as provincial inventories are completed, more information will be available regarding land now non-forested but not productive in an agricultural sense. The Forestry Branch of the Department of Northern Affairs and National Resources estimates that about 46 p.c. of the land area of Canada is forested and, according to the Census of 1956, less than 8 p.c. is classed as occupied farm land. A great part of the 1,687,691 sq. miles of 'other' land is located in the Yukon and Northwest Territories which together have a land area of 1,458,784 sq. miles. The occupied farm land in these Territories is practically nil and the forested area is estimated at 275,800 sq. miles.

1.—Land Area classified as Occupied Agricultural or Forested, by Province

NOTE.—Figures for occupied agricultural land were obtained from the 1956 Census; areas of forested land were compiled by the Forestry Branch, Department of Northern Affairs and National Resources from estimates supplied by the Forest Service in each province and were released Mar. 11, 1957.

Description	New-found-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
Occupied Agricultural Land—												
Improved—	25	659	655	985	8,776	13,365	16,427	60,428	34,284	1,215	1	136,819
Crops and summerfallow.....	9	314	252	395	4,129	5,423	929	1,763	2,000	500	1	15,715
Pasture.....	4	36	77	106	579	856	540	1,100	820	108	1	4,226
Other.....	42	522	2,447	2,662	7,622	5,217	2,448	3,717	4,517	1,337	1	30,532
Unimproved—	32	134	906	510	3,754	6,201	7,674	31,108	30,208	3,932	5	84,464
Forest (woodland) ²												
Other.....												
Totals, Occupied Agricultural Land.....	112	1,665	4,337	4,658	24,860	31,062	28,018	98,116	71,829	7,092	7	271,756
Forested Land—												
Softwood—	25,735	90	4,600	4,997	114,955	57,389	14,863	9,755	9,131	63,328	35,200	340,043
Merchantable.....	3,389	216	3,180	5,962	34,547	34,331	20,778	4,573	27,036	59,849	10,000	203,861
Young growth.....	128	150	825	4,175	29,465	23,242	5,553	6,376	4,583	—	19,800	94,297
Mixed wood—	986	130	480	4,983	28,991	30,750	6,566	8,281	24,142	—	3,500	108,809
Young growth.....	31	14	1,020	7,201	4,208	3,090	7,491	2,183	31,754	—	4,700	31,754
Merchantable.....	236	9	850	1,450	8,606	15,988	4,837	4,625	21,152	—	2,500	60,253
Young growth.....												
Totals, Productive Forested Land.....	30,505	609	11,555	22,783	220,772	108,961	55,627	41,101	88,227	123,177	75,700	839,017
Unproductive Forested Land ³	53,268	—	—	345	130,064	48,691	64,570	79,244	63,051	142,695	200,100	782,028
Totals, Forested Land.....	83,773	609	11,555	23,128	350,836	217,652	120,197	120,345	151,278	265,872	275,800	1,621,045
Net Productive Land⁴.....	30,575	1,751	13,445	24,779	238,010	194,806	81,197	135,500	155,539	128,932	75,706	1,080,241
Other Land⁵.....	59,202	433	7,298	2,349	155,786	99,338	66,008	5,438	30,210	87,652	1,182,978	1,687,691
Totals, Land Area⁶.....	118,045	2,184	20,743	27,473	523,860	333,835	211,775	220,182	248,800	359,279	1,458,784	3,549,960

¹ Less than one square mile.

² Included in *Forested Land*; duplication eliminated in the item *Net Productive Land*.

³ Areas incapable of producing crops of merchantable timber because of adverse climatic, soil or moisture conditions.

⁴ Includes only occupied agricultural land (less forest woodland) plus productive forested land.

⁵ Comprises all urban land, road allowances, grass and brush land and all waste land such as open muskeg, swamp and rock.

⁶ *Net Productive Land* plus *Unproductive Forested Land* plus *Other Land*.

Section 2.—Public Lands

In Table 2 classifying the area of Canada by tenure, items 2, 3, 4 and 5 are obtained from Federal Government sources and items 1, 6, 7 and 8 from Provincial Government sources.

2.—Area classified by Tenure (circa) 1957

Item	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
1. Privately owned land or land in process of alienation from the Crown.....	6,711	2,059	17,311	16,480	43,500	41,205
2. Federal lands other than leased lands, National Parks, Indian reserves and forest experiment stations.....	934	114	205	820	360 ¹	2,244
3. National Parks.....	156	7	377	80	²	12
4. Indian reserves.....	—	4	30	59	279	2,438
5. Federal forest experiment stations.....	—	—	—	35	7	97
6. Provincial lands other than Provincial Parks and provincial forest reserves.....	148,219	—	3,145	10,253	508,180	341,871
7. Provincial Parks.....	48	—	²	—	36,264	5,189
8. Provincial forest reserves.....	117	—	—	258	6,270	19,526
Totals.....	156,185	2,184	21,068	27,985	594,860	412,582
	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
1. Privately owned land or land in process of alienation from the Crown.....	45,965	104,400	81,789	18,987	70	378,477
2. Federal lands other than leased lands, National Parks, Indian reserves and forest experiment stations.....	4,626	7,181	5,511	749	1,508,275 ³	1,531,019
3. National Parks.....	1,148	1,496	20,718 ⁴	1,671	3,625 ⁵	29,290
4. Indian reserves.....	819	1,882	2,399	1,282	9	9,201
5. Federal forest experiment stations.....	⁶	—	47	—	—	186
6. Provincial lands other than Provincial Parks and provincial forest reserves.....	194,428	447	136,083	290,557	—	1,633,183
7. Provincial Parks.....	4,044 ⁷	1,146	119	12,706	—	59,516
8. Provincial forest reserves.....	3,094 ⁷	135,148	8,619	40,303	—	210,241
Totals.....	251,030	251,700	255,285	366,255	1,511,979	3,851,113

¹ Includes Gatineau Park (86 sq. miles) and Quebec Battlefields Park (0.36 sq. mile) which are under Federal jurisdiction but are not technically National Parks. ² Less than one square mile. ³ Includes 952,849 sq. miles set aside by Order in Council as native game preserves in which only Indians and Eskimos may hunt, but which are not regarded as National Parks.

⁴ Includes Wood Buffalo Park (13,675 sq. miles) which, although reserved by the Federal Government, is not administered as a National Park. ⁵ That part of Wood Buffalo Park in N.W.T. ⁶ A forest experiment area of 25 sq. miles is included in National Parks figure.

⁷ Three provincial forest reserves in Manitoba with a total area of 3,094 sq. miles are considered as Provincial Parks though not set up as such; duplication is omitted from totals.

Subsection 1.—Federal Public Lands

Public lands under the administration of the Federal Government comprise lands in the Northwest Territories including the Arctic Archipelago and the islands in Hudson Strait, Hudson Bay and James Bay, lands in Yukon Territory, Ordnance and Admiralty Lands, National Parks and National Historic Sites, Forest Experiment Stations, Experimental Farms, Indian reserves and in general all public lands held by the several Departments of the Federal Government for various purposes connected with federal administration. These lands are administered under the Territorial Lands Act (R.S.C. 1952, c. 263) and the Public Lands Grants Act (R.S.C. 1952, c. 224) which became effective June 1, 1950, and replaced previous legislation.

The largest areas under federal jurisdiction are in the Northwest Territories and Yukon Territory where only 70 sq. miles of a total area of 1,511,979 sq. miles are privately owned. This part of the national domain, with the exception of the islands in Hudson Bay and James Bay, is all north of the 60th parallel of latitude and occupies about 40 p.c. of the surface of Canada. It is under the administration of the Northern Administration and Lands Branch of the Department of Northern Affairs and National Resources.

Subsection 2.—Provincial Public Lands

Public lands of Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia (except the Railway Belt and Peace River Block) have been administered since Confederation by the Provincial Governments. In 1930 the Federal Government transferred the unalienated portions of the natural resources of Manitoba, Saskatchewan, Alberta and of sections of British Columbia to the respective governments and all unalienated lands in the Province of Newfoundland, except those administered by the Federal Government, became provincial public lands under the Terms of Union on Mar. 31, 1949. All land in the Province of Prince Edward Island has been alienated except 125 sq. miles under federal administration.

Information regarding provincial public lands may be obtained from the respective provinces. (See the Directory of Sources of Official Information, Chapter XXIX, under "Lands".)

Subsection 3.—National and Provincial Parks

The future of Canada in the field of outdoor recreation is being wisely provided for by the establishment of National and Provincial Parks. Many of these Parks are easily accessible by highway, rail or air and offer every type of accommodation from camping facilities to cosy cabins and palatial hotels. A wide variety of summer and winter recreational attractions are available in mountain, lakeland, woodland and seaside areas of exceptional scenic beauty.

The extent of the Park areas in each province is given in Table 2 on p. 19; location, year of establishment, area, and main characteristics of each National Park are given in Table 3, which is followed by a brief description of the Provincial Parks.

National Parks.—From 1885, when the first National Park was established around the mineral hot springs at Banff, Alta., until 1956, 30 areas covering more than 29,000 sq. miles have been set aside as National Parks.

These parks are maintained by the Federal Government for the protection of their flora, fauna and natural phenomena, for the preservation of their scenic beauty and interest and, in some, the marking of their historical significance in the building of the nation. They are supervised by the National Parks Branch, Department of Northern Affairs and National Resources and are developed and maintained in such a manner as to provide perpetual inspiration, education and healthful recreation for present and future generations.

The National Parks are Canada's greatest single tourist attraction. Accommodation in privately owned hotels, bungalow cabins, chalets, lodges and cottages is available and modern cabins have been built in several of the parks by the National Parks Administration to afford low rental accommodation to park visitors. Recreational facilities include heated outdoor swimming pools with dressing-room buildings; equipped camp grounds, some with trailer-park facilities; golf courses in superb scenic settings; tennis courts; bowling greens; well equipped children's playgrounds; athletic fields; horseshoe pitches; outdoor checker-boards; and, in some of the parks, amphitheatres where plays, concerts and film shows are held in the open. For winter sports there are downhill and slalom ski courses, ski jumps, ski tows and, at Banff, a chairlift.

A park warden service protects the forests and wildlife and maintains constant vigilance for the safety and comfort of visitors. Stocking and transfer of game fish are carried out extensively and successfully in order to improve angling opportunities in park waters; fish hatcheries are operated in three of the mountain National Parks. The Scientific Management of Game Fish in Canada's National Parks is the subject of a special article on pp. 35-39 of the 1956 Year Book. Two of the National Parks are largely big-game preserves where herds of buffalo and other animals find sanctuary.

In addition to the scenic, recreational and wild animal parks Canada has 12 national historic parks. The National Parks and Historic Sites Service of the Department of Northern Affairs and National Resources is also responsible for the marking, preservation and restoration of places of great historic interest in Canada. More than 500 such sites have been marked on the recommendation of the Historic Sites and Monuments Board of Canada.

3.—Location, Year Established, Area and Characteristics of National Parks

Park	Location	Year Estab- lished	Area sq. miles	Characteristics
Scenic and Recreational Parks				
Banff.....	Western Alberta, on east slope of Rockies.	1885	2,564.0	Magnificent scenic recreational area; noted resorts, Banff and Lake Louise. Mineral hot springs; summer and winter sports. Accessible by rail and highway. Hotel and bungalow cabin accommodation. Equipped camp grounds.
Yoho.....	Eastern British Columbia, on west slope of Rockies.	1886	507.0	Lofty peaks, magnificent waterfalls, colourful lakes. Yoho and Kicking Horse Valleys. Accessible by rail and highway. Hotel and bungalow cabin accommodation. Equipped camp grounds.
Glacier.....	Southeastern British Columbia, on summit of the Selkirk Range.	1886	521.0	Superb alpine region, towering peaks, glaciers and forests. Accessible by rail only. Climbing, skiing, camping.
Waterton Lakes.....	Southern Alberta, adjoining Glacier Park in Montana, U.S.A.	1895	204.0	Canadian section, Waterton-Glacier International Peace Park. Mountain playground with spectacular peaks and beautiful lakes. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp grounds.
Jasper.....	Western Alberta, on east slope of Rockies.	1907	4,200.0	Mountain playground and noted wildlife sanctuary. Majestic peaks, ice fields, beautiful lakes and famous resort, Jasper. Mineral hot springs, summer and winter sports. Accessible by rail and highway. Hotel and bungalow cabin accommodation. Equipped camp grounds.

3.—Location, Year Established, Area and Characteristics of National Parks—continued

Park	Location	Year Estab- lished	Area sq. miles	Characteristics
Scenic and Recreational Parks —concluded				
Mount Revelstoke.....	Southeastern British Columbia, on west slope of Selkirs.	1914	100.0	Rolling mountain-top plateau. Colourful alpine meadows. Accessible by rail and highway. Summer accommodation in Park; all-year accommodation in town of Revelstoke. Championship ski runs and ski jump. Equipped camp grounds.
St. Lawrence Islands...	In St. Lawrence River between Morrisburg and Kingston, Ont.	1914	189.4 (acres)	Mainland area and 13 islands among Thousand Islands. Recreational and camping area. Accessible by highway; by boat from nearby mainland points.
Point Pelee.....	Southern Ontario, on Lake Erie.	1918	6.0	Recreational area. Remarkable beaches, southern flora. Resting place for migratory birds. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp grounds.
Kootenay.....	Southeastern British Columbia, on west slope of Rockies.	1920	543.0	Encloses Vermilion - Sinclair section of Banff - Windermere Highway. Broad valleys, deep canyons, mineral hot springs. Hotel and bungalow cabin accommodation. Equipped camp grounds.
Prince Albert.....	Central Saskatchewan, north of Prince Albert.	1927	1,496.0	Forested region dotted with lakes and interlaced with streams. Summer playground and recreational area. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp grounds.
Riding Mountain.....	Southwestern Manitoba, west of Lake Winnipeg.	1929	1,148.5	Playground and wildlife sanctuary on summit of escarpment. Fine lakes. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp grounds.
Georgian Bay Islands..	In Georgian Bay, north of Midland, Ont.	1929	5.4	Recreational and camping area. Unique pillars on Flowerpot Island. Accessible by boat from nearby mainland points. Equipped camp grounds and annual youth camps on Beausoleil Island.
Cape Breton Highlands.	Northern part of Cape Breton Island, N.S.	1936	390.0	Rugged Atlantic coast line with mountain background. Fine seascapes. Recreational opportunities. Hotel and bungalow cabin accommodation. Equipped camp grounds.
Prince Edward Island..	North shore of Prince Edward Island.	1937	7.0	Strip 25 miles long on shores of the Gulf of St. Lawrence. Recreational area, fine bathing beaches. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp grounds.
Fundy.....	On Bay of Fundy between Moncton and Saint John in New Brunswick.	1948	79.5	Delightful recreational area. Forested region, wildlife sanctuary, rugged terrain. Bungalow cabin accommodation. Equipped camp grounds.
Terra Nova.....	On Bonavista Bay, Newfoundland, 150 miles north of St. John's.	1957	156.0	Newly acquired maritime area as yet undeveloped; rocky headlands, wooded areas with abundant wildlife, off-shore and freshwater fishing.

3.—Location, Year Established, Area and Characteristics of National Parks—concluded

Park	Location	Year Estab- lished	Area	Characteristics
			sq. miles	
Wild Animal Parks				
Elk Island.....	Central Alberta, near Ed- monton.	1913	75.0	Fenced preserve containing large herd of buffalo; also deer, elk and moose. Popular recreational area. Accessible by high- way. Bungalow cabin accommodation and equipped camp grounds.
Wood Buffalo ¹	Partly in Alberta and partly in Northwest Ter- ritories, between Atha- basea and Slave Rivers.	1922	17,300.0	Immense region of forests and open plains. Home of largest remaining herd of bison on the Continent. Other wildlife abun- dant.
Historic Parks				
			acres	
Fort Anne.....	Nova Scotia, at Annapolis Royal.	1917	31.0	Site of early Acadian settlement. Museum and well preserved earthworks.
Fort Beausejour.....	New Brunswick, near Sackville.	1926	81.3	Site of French fort erected in middle of 18th century. Museum.
Fortress of Louisbourg	Cape Breton Island, N.S., 25 miles from Sydney.	1941	339.5	Ruins of walled city erected by the French, 1720-40. Interesting excavations. Mu- seum.
Port Royal.....	Port Royal, N.S., 8 miles from Annapolis Royal.	1941	20.5	Restoration of "Habitation" or first fort built in 1605 by Champlain, DeMonts and Poutrincourt.
Fort Chambly.....	Chambly, Que.....	1941	2.5	French fort on Richelieu River, first built in 1665. Museum.
Fort Lennox.....	Ile-aux-Noix, Que., near St. Johns.	1941	210.0	Site of early French fort built in 1759.
Fort Wellington.....	Prescott, Ont.....	1941	8.5	Defence post built 1812-13. Museum.
Fort Malden.....	Amherstburg, Ont.....	1941	5.0	Site of defence post built 1797-99. Museums.
Fort Prince of Wales...	Northern Manitoba, near Churchill.	1941	50.0	Ruins of fort built 1733-71 to secure control of Hudson Bay for England.
Lower Fort Garry.....	Manitoba, 20 miles north of Winnipeg.	1951	12.8	Stone-walled fort built by the Hudson's Bay Company between 1831 and 1839.
Fort Battleford.....	Saskatchewan, 4 miles south of North Battle- ford.	1951	36.7	North West Mounted Police post built in 1876.
Woodside.....	Kitchener, Ont.....	1954	11.0	Boyhood home of the Rt. Hon. William Lyon MacKenzie King, former Prime Minister of Canada.
Halifax Citadel.....	Halifax, N.S.....	1956	36.9	Defence post constructed 1828-42. Museums

¹Administered by the Northern Administration and Lands Branch, Department of Northern Affairs and National Resources.

Provincial Parks.—In addition to the National Parks described above, most of the Provincial Governments have established parks within their boundaries. These parks, in the same way as the National Parks, are areas of special scenic or other interest, preserved and maintained for the benefit of the public but many of them are still undeveloped. A detailed list of Provincial Parks, showing location, year established, area and a short description of each, is given in the 1954 Year Book, pp. 26-30. The more important parks in each province are mentioned briefly in the following outline.

Newfoundland.—There are 48 sq. miles of provincial park area in Newfoundland. The 42 sq. miles on the west coast established as Serpentine Park is undeveloped, but the 6 sq. miles recently taken over on the Upper Humber River is now under development. Surveys are being conducted with a view to setting aside about 200 acres of Crown land throughout the Province to be used as small parks and picnic sites ranging in size from half-acre to fifty-acre lots.

Quebec.—The Province of Quebec has established five Provincial Parks and eight Fish and Game Reserves. Four of the park areas are quite extensive. La Vérendrye Park, 140 miles northwest of Montreal, has an area of 4,746 sq. miles; Laurentide Park, 30 miles north of Quebec City, has 3,612 sq. miles; Mont Tremblant, 80 miles north of Montreal, 1,223 sq. miles; and Gaspesian Park, Gaspé Peninsula, 514 sq. miles. Mount Orford Park, situated 15 miles west of Sherbrooke, has an area of 16 sq. miles.

The Fish and Game Reserves together occupy more than 30,000 sq. miles. The Chibougamau Reserve and the Mistassini Reserve, both northwest of Lake St. John, cover 3,400 sq. miles and 5,300 sq. miles respectively; the Kipawa Reserve in the Témiscamingue district, 1,000 sq. miles; and the Shickshock Reserve adjoining Gaspesian Park, 314 sq. miles. The Petite Cascapédia, 305 sq. miles, and the Port Daniel, 30 sq. miles, reserved for salmon and trout fishing, both lie along the Bay of Chaleur in Gaspé Peninsula, while the Mingan Reserve, largest of them all with an area of 21,000 sq. miles, lies on the north shore of the St. Lawrence River in Saguenay County.

These parks and reserves are wilderness areas of great scenic interest—for the most part mountainous country threaded with many rivers, lakes and streams and abounding in wildlife. In all of them, except Mount Orford, excellent fishing may be found and most of them have been organized to accommodate sportsmen and tourists in camps, cottages and lodges. Mont Tremblant is a famous resort area in both summer and winter and is easily reached by highway the year round from Montreal. The Department of Game and Fisheries administers the parks and reserves, and also four salmon streams which are open to anglers.

Ontario.—The Provincial Park program in Ontario has been greatly expanded since 1955. Six areas under development at the end of that year have been increased to 110 parks and park reserves by mid-1957. In 83 of these at least minor improvements have been effected and 67 are supplied with caretaker services and with camping and picnic facilities. The four largest parks—Algonquin, Quetico, Superior and Sibley—together have an area of nearly 4,700 sq. miles. Algonquin, 141 miles north of Toronto and 105 miles west of Ottawa, was the first to be established and is the best known. It is well provided with commercial camps for children and adults, easily accessible by road, but the present administrative policy is to encourage the establishment of commercial recreation facilities on the park fringes and to return the park itself to its natural condition. The interiors of Quetico and Superior Parks are also being retained as wilderness areas with fringe development. Quetico Park is accessible by road through the recently developed French Lake campsite, and by water; an extension to Highway No. 17 northward from Sault Ste. Marie will give access to Superior Park; and Sibley Park may also be reached by road from Highway 17 eastward from Port Arthur.

The parks are administered by the Parks Branch of the Department of Lands and Forests, Toronto, from which detailed information is available in brochure form.

Manitoba.—Three forest reserve areas in Manitoba may be considered as Provincial Parks, although they are not set up as such—Whiteshell Forest Reserve (1,088 sq. miles), Cormorant Forest Reserve (580 sq. miles) and Duck Mountain Forest Reserve (1,426 sq. miles). In addition there are eleven areas including the Northern Recreational Area, Amaranth Beach, Lynch Point, Pelican Lake, Rock Lake, Killarney, Seven Sisters, Pine Falls, Beaver Creek, Wallace Lake and Bird Lake, which make up a total of 950 sq. miles of new parks and recreational areas established up to 1957.

Saskatchewan.—Saskatchewan has ten Provincial Parks with a total area of about 1,600 sq. miles. Cypress Hills, Duck Mountain, Greenwater Lake, Moose Mountain, and Valley Centre are operated as summer resorts with chalet, lodge, cabin and trailer accommodation, and camping and picnic facilities. Recreational activities include fishing, boating, swimming, golf, tennis, dancing, baseball, hiking, horseback riding, etc., and the parks are all well fitted with playground and beach equipment for children. In Cypress Hills Park, elk, antelope, deer and beaver are plentiful and brook and other trout abound in the streams and lakes. Heavy stands of tall, straight lodgepole pine provide forest cover in this area. In Duck Mountain, Moose Mountain and Greenwater Lake Parks, moose, elk, deer, bear and beaver are common as well as several varieties of grouse. Spruce, poplar and white birch provide excellent cover for wildlife. Pickerel, pike and perch are prevalent in the lakes.

Alberta.—In Alberta, 31 Provincial Parks have been established by Order in Council of which 25 are being extensively developed at the present time. The Cypress Hills Provincial Park, covering an area of over 77 sq. miles, is the largest of these parks and is situated in the southeast portion of the Province. The other parks under development are: Aspen Beach, Beauvais Lake, Crimson Lake, Cross Lake, Dillberry Lake, Garner Lake, Gooseberry Lake, Kinbrook Island, Lac Cardinal, Little Bow, Ma-Me-O Beach, Park Lake, Pembina River, Red Lodge, Rochon Sands, Saskatoon Island, Stezeville Dinosaur, Sylvan Lake, Taber, Vermilion, Wabamun Lake, Winagami Beach, Woolford and Writing-on-Stone. Picnic facilities, playground equipment and camping areas are provided in these parks which are maintained primarily for the recreation and enjoyment of Alberta residents.

British Columbia.—There are 112 Provincial Parks in British Columbia with a total area of about 12,706 sq. miles. These parks are classified A, B, C and Special. Class A Parks are those considered most highly for immediate recreational development and are strongly protected. Class B Parks are areas slated for development—valuable wilderness areas or places set aside for a specific reason. Class C Parks are intended primarily for the use of local residents and are usually under Board management. Special Parks, of which only one remains, were created in the past by Special Acts of the Legislature. The parks are in all stages of development and dedicated to a variety of recreational uses. There are immense wilderness areas such as Tweedsmuir and Wells Gray Parks and outstanding scenic and mountain places which include Garibaldi, Mount Robson and E. C. Manning Parks. Thousands of city dwellers throng to the ski slopes of Mount Seymour or picnic at Cultus Lake Park. The formal gardens of Peace Arch are a monument to the goodwill between Canada and the United States. Vancouver Island has a chain of small forest parks that have achieved a tremendous popularity with tourists—the best known are Little Qualicum Falls and Miracle Beach. In addition there is a campsite system closely integrated with the Provincial Parks, many campsites actually being located in the parks.

Subsection 4.—The National Capital Plan

Ottawa, the city selected by Queen Victoria in 1857 to be the permanent seat of the legislature of the united provinces of Upper and Lower Canada, was designated the National Capital of the Dominion upon Confederation in 1867. The community grew out of the military and construction camp which served as headquarters for the building of the Rideau Canal—a military project carried out between 1826 and 1832 which utilized the Rideau and Cataraqui Rivers to link Kingston on the St. Lawrence River and Lake Ontario with the Ottawa River thus providing a safe interior military waterway between Lake Ontario and Montreal by bypassing the vulnerable international section of the St. Lawrence River. Originally known as Bytown, after Col. John By, R.E., builder of the canal, the settlement prospered with the development of the lumber trade. The Act of Incorporation, changing Bytown to the City of Ottawa, was proclaimed on Jan. 1, 1855.

The city, situated in an area of great natural beauty, has remained a self-governing municipality and, although throughout the years the Federal Government co-operated with the municipal authorities in the development of a system of driveways and parks,

the city expanded without the benefit of any planned direction. In 1946, however, a Master Plan was approved, designed to guide the development of the Capital's urban area over the next half-century and to protect the beauty of the surrounding National Capital District. That District covers an area of about 900 sq. miles, one-third of which lies in the Province of Ontario and the remainder in Quebec. The co-operation of the Cities of Ottawa and Hull, twenty-eight other autonomous municipalities and the two provincial governments is essential to the successful implementation of the Plan. The federal agency responsible for its fulfilment is the Federal District Commission.

Projects under the Master Plan fall into four main categories: those for which the FDC is responsible, such as development of the Capital's parkway and parks system, including Gatineau Park and the relocation of the Capital's railway system; the federal building program, carried out by the Department of Public Works or other federal agencies, with the locations and exterior design of buildings subject to FDC approval; joint projects with the local municipalities in which the FDC is the federal planning and financial agency; and, finally, entirely municipal projects.

Details of the Plan are given in the 1956 Year Book at pp. 30-34. The present coverage serves to bring that review up to mid-1957.

The year 1957 was the tenth of active development under the Master Plan. During that year, in the urban area, work continued on the development of the 125-acre Hog's Back Park, designed to accommodate group picnics, and on Colonel By Drive along the east bank of the Rideau Canal between Dow's Lake and Hog's Back. The reconstruction of the Lady Alexander Drive section of the Driveway system in Rockcliffe, with its attractive views of the Ottawa River, was completed. Restoration of the Rideau Falls area continued with the demolition of old buildings adjacent to the French Embassy and the landscaping of the point on Green Island between the twin falls. Construction of Ottawa's new City Hall on the upstream end of Green Island was well advanced. In the east Hull area, plans were made for the development of a large park, with bathing and picnicking facilities, at Leamy Lake.

Progress on the long-range project to remove most of the railway operations from the central area of Ottawa to the outskirts continued with the transfer of CNR local freight services from Union Station to the new Ottawa freight terminus constructed by the FDC east of the Rideau River in the Hurdman Bridge area. The new Walkley Road yard facilities constructed by the Commission along the southern boundary of Ottawa West were occupied by the CNR in 1955, permitting the abandonment of the old CNR Bank Street yards on the cross-town tracks and clearing the right-of-way for construction of the Queensway. The agreement for the construction of the Queensway (actually a rerouting of Highway 17 for 21 miles across the Capital and its approaches from east to west, using the right-of-way of the abandoned CNR cross-town tracks for most of its length) was signed in 1957. The costs of this \$31,000,000 project will be shared by the Ontario Department of Highways, the Trans-Canada Highway Authority of the Federal Department of Public Works and by the City of Ottawa, the FDC providing the right-of-way westerly from the City's eastern boundary. Negotiations continued with the Canadian National and Canadian Pacific Railway Companies for establishment of a terminal company to operate all rail facilities south of the Ottawa River.

The extensive federal building program continued, although some years will elapse before new construction will permit the demolition of all the temporary wartime office structures erected in the Capital. Twelve major federal building sites in different sections of Ottawa's metropolitan area are in various stages of development, and over the past decade about 150 new federal buildings have been built or are under construction. Currently under development is the Rideau Heights site, overlooking the Rideau River between the south central area and the airport, where new buildings are being erected for the Department of Public Works and the Post Office Department; and the Department of Mines and Technical Surveys site adjacent to the Bureau of Mines buildings on Booth Street near Carling Avenue. A new Canadian Broadcasting Corporation head office

building will also be built in the Rideau Heights area. Development of the Tunney's Pasture site in the west central area continued with completion of new buildings for branches of the Departments of National Health and Welfare and for Atomic Energy of Canada. A start was made on the new Science Service Building of the Department of Agriculture in the Dominion Experimental Farm. The west structure of the Veterans Memorial Buildings on Wellington Street will be completed in 1958 and will be occupied by the Department of Trade and Commerce thus permitting demolition of No. 1 Temporary Building on the west end of Wellington Street and the erection there of the new National Library building.

A number of other federal buildings are in the planning stage, including a tri-service hospital on the Smyth Road east of the Rideau River. Ottawa's airport, where the FDC co-ordinated plans of the Royal Canadian Air Force, the Department of Transport and the National Aeronautical Establishment, is being extensively developed, and the Department of Transport started construction of a modern civilian air terminal building.

By 1957 the FDC had acquired most of the land needed for some fifty miles of new federal parkways, but apart from completion of the two-mile Fairy Lake Parkway in west Hull, no actual starts had been made. Fortune Lake Parkway in Gatineau Park, with its spectacular vistas of the Ottawa River valley, was paved and landscaped and a start was made on the ten-mile section running northerly from the Aylmer road in west Hull. The land acquisition program for the development of Gatineau Park in the Laurentian Hills north and west of the Ottawa-Hull metropolitan area made progress, and park improvements were continued with the construction of additional parking areas for the extensively used picnic grounds and bathing beaches at Lac Philippe.

Ottawa's major new municipal project is the widening of Carling Avenue from Bronson west to Kirkwood. Federally owned lands necessary to the construction of the new divided roadway were contributed to the project. The City has also undertaken the preparation of an official plan to guide its development within the framework of the Master Plan and part of the costs and technical assistance are being provided by the Commission. A federal-municipal committee was established to study the question of Ottawa River crossings between Ottawa and Hull. The committee concurred in the recommendations of an engineering firm that a new Ottawa-Hull bridge be eventually located about half a mile downstream from the present Interprovincial road and rail bridge. Smaller municipalities in the National Capital region are also being assisted by the FDC in the preparation of building and zoning by-laws.

In the spring of 1957 a Joint Committee of the Senate and the House of Commons reviewed the progress made by the Federal District Commission in the implementation of the National Capital Plan and its projects for the future. The Joint Committee report resulted in the drafting and subsequent first reading in Parliament of a new Act designed to facilitate the Commission's work, both in federal planning works and in co-operative Master Plan projects with the local municipalities.

Section 3.—Wildlife Resources and Conservation*

The Canadian Wildlife Service.—The Canadian Wildlife Service of the National Parks Branch, Department of Northern Affairs and National Resources is responsible for attending to wildlife matters coming within the jurisdiction of the Federal Government, except those within the purview of the National Museum and certain activities closely related to Indian affairs.

Its functions include acting in an advisory capacity with regard to conservation and management of wildlife in the Northwest Territories and Yukon Territory; advising and co-operating with the National Parks and Historic Sites Division regarding fish and wildlife problems in the National Parks; and administration of the Migratory Birds Convention Act in conjunction with the Royal Canadian Mounted Police and in co-operation with the

* Prepared by the Canadian Wildlife Service, Department of Northern Affairs and National Resources, Ottawa.

provincial game authorities. The Canadian Wildlife Service also handles national and international problems relating to Canada's wildlife resources and co-operates with governmental and other agencies having similar interests and problems in Canada and elsewhere.

The Service issues permits for bird-banding in Canada and is the Canadian clearing-house for bird-banding information. It issues permits to qualified persons to take migratory birds for scientific purposes; to take and possess migratory birds for propagating purposes; to collect eiderdown; and to engage in the business of taxidermy.

The Canadian Wildlife Service plans and carries out research into the ecology, numbers, food, shelter, migration, reproduction, diseases, parasites, predators, competitors and uses of wild creatures in Canada. In certain of these investigations, e.g., the mid-winter waterfowl inventory, it works in close co-operation with the United States Fish and Wildlife Service and with federal, provincial and private agencies in Canada. The Service is responsible for the establishment and administration of bird sanctuaries under the Migratory Birds Convention Act. On Dec. 31, 1956, there were 90 bird sanctuaries in Canada with a total area of more than 1,800 sq. miles.

The Limnology Section of the Service is concerned with research leading to the maintenance and improvement of sport fishing, the control of aquatic and semi-aquatic insects, the control of algæ, and with other biological problems that arise in regard to water areas in the National Parks. It also acts in an advisory capacity to the Northern Administration and Lands Branch in connection with aquatic biological matters.

A series of special articles relating to the wildlife resources of Canada are being carried in the Year Book. Articles on Migratory Bird Protection in Canada, Game Fish in Canada's National Parks, The Barren-Ground Caribou, Migratory Bird Legislation, and Scientific Management of Game Fish in Canada's National Parks were carried in the 1951, 1952-53, 1954, 1955 and 1956 editions, respectively. The following article on the Musk-ox has been prepared by the mammalogical section of the Canadian Wildlife Service.

THE MUSK-OX

Canada shares with Greenland the distinction of harbouring native stocks of one of the most interesting of the Arctic animals, the musk-ox. This ruminant, or cud-chewing mammal, is found in certain areas of the Arctic mainland of Canada and on most of the larger Arctic islands. At first glance the musk-ox looks like a very hairy buffalo, but closer inspection reveals many important differences. Although it has a hump over the shoulders like a buffalo, the musk-ox is smaller, a large bull weighing up to about 900 lb. It has a long shaggy outer coat of hair and a very fine inner 'wool' to provide protection in winter.

The musk-ox is a survivor of ice-age times. It lived when the woolly mammoth roamed northern North America but, unlike the latter, it managed to survive after the disappearance of the vast glaciers which covered much of the country. In physical structure the musk-ox is closer to sheep or goats than to cattle. Its nearest living relative is the takin, an animal found only in mountainous Tibet.

At one time, before they began to be hunted, musk-oxen had a wide if sparse distribution throughout the barren-land regions of the Arctic mainland and Arctic islands of Canada. One exception is that there are no known records of musk-oxen on Baffin Island, possibly because of their extinction long ago by natives or because that island, for obscure reasons, was never colonized by musk-oxen.

However, records left by Samuel Hearne in the 1770's provide evidence that, even at that time, musk-oxen were restricted in numbers and distribution. Again, from 1862 to 1916 the Arctic mainland population was further drastically reduced. Musk-oxen were killed

for the commercial value of their hides, for skins and for meat by whalers wintering along the Arctic coast east of the Mackenzie River delta. On the Arctic islands similar heavy killing is recorded. The population on Banks Island was exterminated by natives before 1870 and, in the name of exploration, hundreds of animals were killed on Melville and Ellesmere Islands early in the present century. By 1930 the total population of musk-oxen in Canada was estimated by Dr. R. M. Anderson of the National Museum of Canada to be between 12,000 and 13,000 animals, of which 500 were on the mainland. That estimate is now believed to have been too high.

The extermination of many herds and the near elimination of many others, particularly on the Canadian Arctic mainland, in the second half of the 19th century and during the first fifteen years of the 20th century, created grave concern for the survival of the musk-ox. To conservationists it was unthinkable that a large ungulate, well adapted to living in a rigorous Arctic environment, should become extinct. The Canadian Government therefore passed an Act in 1917 protecting musk-oxen completely and in 1927 set aside the Thelon Game Sanctuary in the Northwest Territories to provide an area where musk-oxen and other valuable wildlife could increase without human interference.

Today musk-oxen are increasing steadily, if slowly, in numbers and are being reported in areas such as Banks Island and the area north of Great Bear Lake, where formerly they were believed to have been exterminated. The population in the Thelon Game Sanctuary is estimated to be over 350 animals. The total population in Canada is estimated at about 5,000 animals, of which 1,500 are thought to be on the Arctic mainland and 3,500 on the Arctic islands.

Musk-oxen are essentially gregarious, feeding and travelling in herds which vary in size from units of four or five animals to as many as one hundred. Herds exist throughout the year but probably do not contain the same individuals from year to year because the herds mingle in the autumn after the breeding season and disperse later into smaller units. When grazing or browsing, the individuals of a herd may be spread over an area of several hundred square yards but the herd unity is not lost because the wanderers rejoin the herd as soon as they notice their exposed situation. Mature bulls are frequently solitary in their habits, particularly immediately before and after the breeding season.

This desire to remain in herd formation appears to be an outstanding characteristic of the animals. The value and perhaps the original function of that social character is evident when a herd is attacked by wolves. The musk-oxen group together in a rough circle, facing outwards, with calves and immature animals between the adults. One wolf or a small pack would not be likely to attack successfully such a defensive formation. The sharp, heavy horns of adult cows and bulls, their heavy coat of long hair, nimble feet and powerful bodies make them formidable opponents. When sled dogs or possibly a large pack of wolves attack musk-oxen, bulls and adult cows make short dashes towards the predators in attempts to gore them, and then back into the herd. Under such circumstances it is possible that some musk-oxen are killed by their attackers.

The food of musk-oxen varies with the season and the terrain. In summer, on the Canadian Arctic mainland, the animals are browsers and grazers, feeding on willow, grasses, forbs and sedges. On the Arctic islands where willow growth is confined to prostrate plants sparsely scattered over large regions, musk-oxen must use a larger proportion of grasses and plants such as saxifrage (*Saxifraga oppositifolia* L.) and dryas (*Dryas integrifolia* M. Vahl.). Winter food is obtained in hilly country where vegetation is kept partly or completely free of snow by prevailing winds. Willow, birch, labrador tea and other woody plants form the bulk of food in winter. The extent of the seasonal movements between winter and summer ranges depends upon the nature of the country in which the animals live. In the

Arctic islands preliminary evidence suggests that these movements do not involve distances of more than 50 miles. On the mainland of Canada evidence suggests that musk-oxen there may move a distance of 50 to 100 miles or more to reach suitable feeding areas.

Much remains to be discovered about the reproductive biology of these ungulates. Their remote environment and relative scarcity make it difficult and expensive to conduct continuous long-term investigation. However, it is believed that musk-ox cows are mature at three or four years of age and bulls at five or six years of age. Cows do not seek a solitary spot to give birth to young, but remain with the herd. Evidence obtained from various studies suggests that calving occurs in alternate years with one calf delivered at a time. Twins are born rarely.

Fighting between adult bulls for the possession of herds and essentially of cows occurs chiefly during the months of July and August. Breeding occurs then, and the calving season extends from about the middle of April to the end of May. These dates appear to be true for the entire range of musk-oxen, which extends over a distance of 1,100 miles from latitude 64° N. to 82° N.

The calf percentage in a musk-ox population is low when compared with that of many other ungulates. On Fosheim Peninsula, for example, calves in 1951 comprised 9.2 p.c. of 215 animals, and in the Thelon Game Sanctuary in 1952 they were 11.2 p.c. of 169 musk-oxen. Calf survival was found to be extremely low in 1951 on Ellesmere Island, only three yearlings being present in the population studied. In the Thelon Game Sanctuary, however, survival in 1952 was found to be slightly over 60 p.c.

Canada's musk-oxen, in the rather distant future, may become an increasingly valuable resource. From a scientific viewpoint they present very interesting problems of research and management. From an economic viewpoint, as a result of eventual restocking of depleted areas and careful management of existing stocks, musk-oxen may once more reach the level of abundance where utilization could be permitted by natives or resident white people.

PART III.—CLIMATE AND TIME ZONES

Section 1.—Climate

A comprehensive discussion of the climatic regions of Canada is available in the 1948-49 Year Book, pp. 41-62, and detailed tabulations of climatic factors covering 36 meteorological stations located mostly at well known or populous centres are given in the 1950 Year Book, pp. 35-70. Other articles appearing in previous editions are listed under "Climate and Meteorology" in Chapter XXIX of this volume.

Table 1 gives long-term temperature and precipitation data for 35 representative Canadian stations; Tables 2 and 3 provide monthly temperature and precipitation data during 1956 for these same stations. These are mostly well sited or populous places with climates fairly representative of a considerable area. The figures given under "Temperatures" are averages obtained over the period of observation. Under "Precipitation", in calculating the annual total, inches of rain is considered the total depth of water accumulated on a hypothetical horizontal impervious surface without evaporation. Similarly the depth of snow given is that which falls on a horizontal surface without settling, melting or sublimation. Because the depth of water obtained from melting newly fallen snow is roughly one-tenth of the depth of the snow, the total precipitation is obtained by adding together the total rainfall and one-tenth of the depth of the newly fallen snow. A day with rain is, for the purpose of these tables, one on which 1/100 of an inch or more falls and a day with snow is one with at least 1/10 of an inch of newly fallen snow. Whenever the temperature four feet above the ground falls to 32°F. or lower the day is counted as a day with frost. The average date of the last spring frost and of the first frost in autumn marks the approximate period continuously free from frost.

1.—Long-Term Temperature and Precipitation Data for 35 Representative Stations

Station	Height Above Sea ft.	Length of Record yrs.	TEMPERATURES (Fahrenheit)				Annual Heating Degree Days ¹	Killing Frost Average Dates		PRECIPITATION (inches)					Number of Days Precipitation		
			Annual	Jan.	July	Highest on Record 1921-50		Lowest on Record 1921-50	Last in Spring	First in Autumn	Annual Total	Annual Snow	Jan.	Apr.		July	Oct.
Gander, Nfld.....	482	14	39.2	19.0	62.1	-16	9,440	June 1	Oct. 3	39.50	119.2	2.63	2.57	3.61	4.09	88	
St. John's (Torbay), Nfld.....	463	10	40.6	23.9	59.4	-10	8,940	June 2	Oct. 10	59.99	141.3	5.22	5.02	3.97	5.59	74	
Goose Bay, Nfld.....	144	10	31.7	0.0	61.2	86	12,140	June 10	Sept. 14	29.05	144.1	1.93	1.76	3.28	2.42	208	
Charlottetown, P.E.I.....	186	30	42.5	18.8	66.6	98	8,710	May 16	Oct. 14	43.13	112.7	4.09	2.83	2.85	4.17	52	
Digby, N.S.....	43	30	44.4	25.3	63.8	92	7,560	May 10	Oct. 12	43.50	44.8	3.80	3.04	3.71	4.28	20	
Halifax, N.S.....	83	30	44.4	24.4	65.0	94	7,555	May 13	Oct. 12	54.26	64.1	5.16	4.48	3.62	5.12	38	
Sydney, N.S.....	197	30	42.8	22.7	65.0	98	8,220	May 20	Oct. 13	50.61	96.6	4.86	3.77	2.98	5.22	53	
Charlottetown, N.B.....	112	26	39.7	12.4	66.1	102	8,280	May 21	Sept. 28	31.33	84.2	2.59	2.78	3.10	3.86	50	
Fredericton, N.B.....	164	30	41.2	14.2	66.6	102	8,830	May 20	Sept. 23	41.90	88.4	3.18	3.37	3.35	4.16	55	
Saint John, N.B.....	119	30	42.0	19.8	61.8	93	8,380	May 4	Oct. 16	47.69	83.0	4.55	3.62	3.28	4.77	49	
Arvida, Que.....	375	19	36.6	4.2	65.2	-42	10,440	May 31	Sept. 19	38.77	115.7	2.87	2.53	4.17	3.45	70	
Lennoxville, Que.....	498	30	41.6	13.2	66.6	99	8,670	May 20	Sept. 10	40.11	96.5	3.37	3.01	4.08	3.40	150	
Montreal, Que.....	187	30	43.7	15.4	70.4	97	8,130	Apr. 28	Oct. 17	41.80	100.8	3.54	3.37	3.97	3.40	59	
Fort William, Ont.....	644	30	36.8	7.6	63.4	91	10,640	June 4	Sept. 7	27.62	68.8	1.67	1.81	3.26	2.52	53	
Kapuskasing, Ont.....	752	13	33.4	-0.1	63.2	101	11,750	June 11	Sept. 5	34.51	124.0	2.40	2.03	3.63	2.56	93	
Ottawa, Ont.....	290	30	41.6	12.0	68.6	102	8,740	May 11	Sept. 29	34.89	80.5	2.67	2.62	3.53	2.70	47	
St. Catharines, Ont.....	347	20	48.4	26.7	71.7	104	6,670	May 5	Oct. 21	30.72	47.1	2.54	2.47	2.36	2.38	132	
Toronto, Ont.....	379	30	47.0	24.5	70.8	-12	7,008	May 3	Oct. 15	30.94	54.6	2.72	2.55	3.23	2.29	47	
Churchill, Man.....	43	21	18.8	-16.4	55.0	-50	16,910	June 28	Aug. 30	14.41	45.1	0.39	1.21	2.51	1.53	51	
The Pas, Man.....	890	29	31.4	-6.2	64.9	100	12,460	May 30	Sept. 9	16.98	53.2	0.77	0.93	2.42	1.41	42	
Winnipeg, Man.....	786	30	36.6	0.6	68.4	108	10,685	May 27	Sept. 15	19.72	49.4	0.93	1.20	2.72	1.44	53	
Prince Albert, Sask.....	1,414	30	34.0	-1.3	65.3	103	11,430	May 30	Sept. 10	15.60	45.1	0.60	1.08	2.15	0.99	54	
Regina, Sask.....	1,884	20	36.7	2.3	66.3	110	10,770	June 5	Sept. 6	15.09	40.1	0.65	0.81	2.13	0.85	54	
Beaverlodge, Alta.....	2,500	30	36.1	9.7	60.2	98	10,530	May 30	Sept. 3	17.32	68.2	1.19	0.87	2.31	1.04	57	
Calgary, Alta.....	3,540	30	39.0	15.8	62.4	97	9,520	June 3	Sept. 17	37.47	57.0	0.55	1.26	2.41	0.89	47	
Edmonton, Alta.....	2,219	30	36.8	7.7	62.9	99	10,230	May 29	Sept. 6	17.63	52.9	0.90	1.10	3.11	0.84	62	
Medicine Hat, Alta.....	2,365	30	42.2	13.7	70.2	106	8,650	May 15	Sept. 18	13.55	41.6	0.72	0.99	1.38	0.72	45	
Cranbrook, B.C.....	3,013	30	41.2	15.6	64.4	102	8,790	June 10	Aug. 27	14.46	54.5	1.58	0.61	0.85	1.11	41	
Nelson, B.C.....	2,035	30	45.8	26.7	67.2	103	7,180	May 10	Oct. 3	28.52	90.0	3.48	1.59	1.15	0.98	32	
Penticton, B.C.....	1,121	30	48.0	24.4	68.7	105	6,410	May 7	Oct. 3	11.50	25.4	0.98	0.83	0.78	0.85	29	
Prince George, B.C.....	2,218	30	38.9	14.6	59.6	102	9,720	June 17	Aug. 24	22.17	66.6	1.85	0.96	2.14	2.12	43	
Victoria, B.C.....	298	30	50.2	39.2	60.0	95	5,410	Feb. 28	Dec. 7	26.18	10.1	4.05	1.17	0.49	2.90	5	
Dawson, Y.T.....	1,062	30	23.8	-16.0	59.8	95	15,040	June 4	Aug. 18	13.99	52.5	0.88	1.63	1.72	1.07	53	
Coppermine, N.W.T.....	143	19	11.7	-19.0	49.0	87	19,410	June 28	Aug. 18	10.87	55.5	0.60	0.67	1.52	1.23	64	
Fort Good Hope, N.W.T.....	214	29	17.8	-21.0	59.8	94	17,200	June 1	Aug. 11	12.18	37.3	0.72	0.50	1.55	1.20	106	

¹ Degree days represent the difference in temperature between the mean temperature of the air and the temperature of 65°F. multiplied by the number of days during which the outside temperature was lower than that figure, computed for the twelve months. Fuel consumption for heating purposes will be proportional to these totals.

² Number of days snowfall plus number of days rainfall.

2.—Temperature Data for 35 Weather Stations by Month 1956

Station	Monthly Mean Temperature (Fahrenheit)												Annual Mean Tem- perature	Tem- perature Differ- ence from Normal	Annual Temperature Extremes	
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.			Highest	Lowest
	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year				
Gander, Nfld.	29.8	21.2	22.0	35.2	41.6	53.2	60.6	59.5	52.4	44.9	37.6	21.2	39.9	0.7	83	-3
St. John's (Torbay), Nfld.	31.6	24.5	24.6	35.6	40.8	51.4	56.8	58.0	51.2	44.6	34.7	26.7	40.5	-0.1	79	-4
Goose Bay, Nfld.	15.6	4.3	12.0	30.8	35.1	47.0	56.3	56.4	48.9	40.7	23.9	-1.2	31.1	-0.6	86	-26
Charlottetown, P.E.I.	28.1	19.1	22.2	34.8	43.8	57.4	62.1	61.8	55.0	47.9	38.1	24.6	41.2	1.3	81	-8
Digby, N.S.	32.6	26.9	29.2	40.2	45.4	58.6	62.9	63.1	56.8	50.6	44.7	33.6	44.7	1.0	83	-7
Halifax, N.S.	33.4	26.8	28.5	39.7	46.3	57.4	64.3	63.6	57.8	51.8	43.8	31.1	45.5	1.1	86	-5
Sydney, N.S.	32.2	22.5	23.6	35.6	42.3	56.0	61.5	61.2	55.0	48.4	41.1	29.2	42.4	-0.4	85	-1
Chatham, N.B.	26.2	16.8	22.8	37.0	45.4	59.6	63.7	61.6	53.7	46.6	35.0	18.1	40.5	0.8	92	-12
Fredericton, N.B.	25.8	17.6	21.6	38.6	46.2	60.9	63.8	62.2	53.4	45.8	34.0	20.8	41.0	-0.2	93	-17
Saint John, N.B.	27.4	20.6	23.4	38.2	44.9	55.8	60.3	61.1	53.6	47.4	38.0	25.5	41.4	-0.6	82	-6
Arvida, Que.	14.9	10.2	15.0	36.1	43.6	59.2	61.0	59.8	50.1	45.3	29.9	8.4	36.1	-0.5	90	-26
Lennoxville, Que.	17.0	16.6	18.8	38.4	46.6	62.0	63.3	62.8	53.1	47.4	34.7	21.0	40.1	-1.5	91	-35
Montreal, Que.	21.1	21.4	24.2	41.6	51.1	65.4	67.7	68.4	57.2	51.8	37.4	23.0	44.2	-0.7	96	-11
Fort William, Ont.	11.9	10.1	17.3	33.1	44.6	60.5	62.0	59.8	48.6	46.8	27.9	10.8	36.1	-0.5	91	-28
Kapuskasing, Ont.	4.0	8.0	10.8	30.8	39.7	53.9	58.6	58.4	46.0	25.4	25.4	2.0	32.4	-1.0	97	-33
Ottawa, Ont.	16.8	17.5	21.9	38.9	49.4	64.2	65.2	65.2	54.4	48.8	35.0	20.2	41.5	-0.1	94	-13
St. Catharines, Ont.	25.2	28.2	31.0	41.9	51.9	65.4	63.0	68.2	57.7	52.5	40.8	34.2	47.1	-1.3	93	-3
Toronto, Ont.	24.9	28.0	30.5	41.9	52.0	66.4	68.8	68.4	58.0	53.8	41.4	32.0	47.2	0.2	95	-1
Churchill, Man.	-10.7	-15.0	-2.7	14.0	22.0	41.1	56.2	52.8	38.4	29.0	8.2	-15.7	18.1	-0.7	91	-43
The Pass, Man.	-7.6	-2.0	8.0	25.2	43.2	62.4	63.0	61.6	45.8	38.9	19.8	-0.6	29.8	-1.6	96	-42
Winnipeg, Man.	1.8	2.2	13.0	30.4	48.4	68.4	65.0	65.4	51.0	46.6	27.2	7.4	35.6	-1.0	95	-31
Prince Albert, Sask.	-6.1	-2.7	10.0	28.3	50.6	61.9	62.6	61.0	47.4	39.0	23.4	3.2	31.6	-2.4	93	-40
Regina, Sask.	0.8	2.0	13.8	30.8	52.0	64.9	63.3	63.6	51.7	40.8	25.2	8.8	34.8	-1.9	99	-49
Beaverlodge, Alta.	-3.7	8.5	20.9	36.2	53.4	64.7	61.0	59.6	48.4	34.5	35.1	12.9	35.1	-1.0	87	-37
Calgary, Alta.	5.8	10.8	24.0	34.9	50.6	56.4	61.8	59.5	50.8	37.6	34.8	19.8	37.2	-1.8	88	-31
Edmonton, Alta.	-1.6	8.6	21.1	36.1	55.4	59.8	63.8	62.0	50.8	35.2	34.2	13.8	37.0	0.2	90	-30
Medicine Hat, Alta.	-1.6	9.2	25.6	39.4	54.9	62.8	67.5	64.9	56.0	45.4	34.9	20.4	40.6	-1.2	95	-37
Cranbrook, B.C.	18.5	16.2	29.9	42.9	53.0	57.1	65.2	63.3	55.3	42.3	26.8	21.0	41.0	-0.2	95	-26
Nelson, B.C.	29.1	24.5	34.5	46.4	56.2	58.5	67.8	67.3	58.2	44.9	33.2	31.0	46.0	0.3	95	-4
Penticton, B.C.	30.2	25.1	36.7	49.5	58.5	60.8	68.2	68.2	59.3	47.4	35.6	31.6	47.7	-0.3	97	-6
Prince George, B.C.	3.0	9.9	26.0	38.0	50.2	53.1	59.4	58.2	49.1	36.4	28.2	18.7	35.9	-3.0	88	-44
Victoria, B.C.	39.3	36.9	41.6	50.2	56.0	55.5	61.0	59.6	56.3	49.6	43.8	41.0	49.2	-1.0	88	14
Dawson, Y.T.	-27.5	-17.2	0.5	29.4	46.8	55.2	59.9	53.2	40.4	19.0	1.6	-19.0	19.5	4.3	53	-59
Coppermine, N.W.T.	-17.8	-26.6	-15.4	1.6	16.2	38.7	50.2	43.6	33.8	13.5	-4.6	-27.3	9.7	-2.0	77	-49
Fort Good Hope, N.W.T.	-28.8	-26.2	-2.5	17.9	38.4	53.9	58.8	49.9	38.4	12.0	-5.9	-24.3	15.1	-2.7	84	-59

3.—Precipitation Data for 35 Weather Stations by Month 1956

Station	Monthly Precipitation (inches)												Total Precip- itation ¹ (inches)	Total Inches Precip- itation Differ- ence from Normal for Year	1955-56 Snowfall (inches)
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.			
Gander, Nfld.	4.28	3.78	3.90	4.26	1.75	4.69	2.95	1.95	1.57	1.47	4.81	3.36	38.77	-0.73	199.5
St. John's (Torbay), Nfld.	4.99	6.86	5.68	7.84	6.72	3.23	5.31	5.15	7.51	3.66	8.19	4.14	69.28	9.29	226.7
Goose Bay, Nfld.	6.26	2.34	2.95	2.51	1.57	3.87	2.97	3.04	2.66	2.63	3.15	3.21	37.16	8.11	219.9
Charlottetown, P.E.I.	9.07	3.70	4.28	3.67	3.73	3.44	2.92	1.69	2.41	1.17	4.40	4.03	44.91	1.78	164.2
Digby, N.S.	10.39	3.52	5.30	3.50	7.34	3.99	3.27	4.35	5.05	1.70	4.13	4.31	57.25	13.75	100.0
Halifax, N.S.	8.99	5.50	5.77	4.88	5.28	1.97	3.00	2.43	2.65	1.75	5.34	3.70	50.57	-3.69	142.7
Sydney, N.S.	9.76	5.41	7.34	4.70	5.73	4.11	3.44	3.62	1.87	1.49	7.26	4.53	57.36	6.75	195.9
Shatham, N.B.	11.27	2.21	2.91	3.75	2.43	6.17	2.14	3.74	1.82	1.88	4.14	3.99	47.45	11.12	123.2
Frederton, N.B.	7.00	2.63	3.80	3.40	3.88	2.91	2.23	3.78	2.92	1.84	3.07	3.60	41.06	0.84	110.1
Saint John, N.B.	7.26	4.52	5.82	4.50	4.91	2.47	3.18	2.54	3.97	2.10	5.13	5.72	52.12	4.43	129.3
Arvida, Que.	2.05	2.52	1.40	1.89	3.03	2.88	4.77	3.91	2.75	2.10	1.99	3.35	32.64	-6.13	103.8
Lennoxville, Que.	2.58	2.26	2.75	3.07	3.49	2.38	4.33	3.58	3.77	2.40	2.51	3.42	36.54	-3.57	111.9
Montreal, Que.	1.42	3.04	2.89	3.68	4.03	2.87	4.71	3.01	2.18	1.41	1.59	2.32	33.15	-8.65	83.0
Fort William, Ont.	5.64	1.11	2.26	2.49	3.54	2.52	2.98	1.52	3.52	0.60	3.31	3.95	33.44	5.82	169.1
Kapuskasing, Ont.	0.92	1.49	0.87	2.29	4.53	3.11	2.78	2.29	3.63	1.57	3.29	2.64	29.41	-5.10	144.9
Ottawa, Ont.	1.56	2.29	2.17	4.77	4.24	2.54	2.97	5.09	0.90	1.24	1.92	1.82	31.51	-3.38	70.3
St. Catharines, Ont.	1.78	2.58	3.67	3.65	5.20	1.02	5.00	6.00	2.78	1.04	1.36	2.44	36.52	5.80	51.6
Toronto, Ont.	1.88	2.05	3.89	3.12	4.70	1.63	3.32	5.94	1.86	1.11	1.60	2.51	33.61	2.67	67.6
Churchill, Man.	0.48	0.50	0.38	1.33	1.14	2.24	0.28	1.97	1.66	1.40	1.62	0.62	13.62	-0.79	85.2
The Pas, Man.	1.36	1.24	1.56	0.82	1.34	1.87	1.71	1.08	1.60	1.16	1.59	0.84	16.17	-0.81	93.3
Winnipeg, Man.	1.73	1.07	1.56	0.25	1.98	2.23	3.33	5.39	0.78	2.01	1.93	1.51	23.77	4.05	99.5
Prince Albert, Sask.	0.87	0.97	1.39	0.34	0.73	3.00	2.18	0.90	1.26	0.30	0.56	0.73	13.23	-2.37	70.5
Regina, Sask.	1.44	0.61	2.00	0.76	1.53	5.13	3.46	1.12	0.85	1.18	0.29	1.42	19.79	7.73	78.5
Beaverlodge, Alta.	1.03	0.64	1.46	0.11	0.34	4.76	2.13	1.79	1.05	0.84	1.11	1.99	17.25	-0.07	79.0
Calgary, Alta.	1.36	0.44	0.98	1.14	1.19	5.14	1.52	3.12	0.83	0.83	0.46	0.84	17.87	69.5	69.5
Edmonton, Alta.	1.11	1.20	1.20	0.64	0.28	5.21	2.75	4.13	1.38	0.50	0.48	1.27	20.13	2.50	73.4
Medicine Hat, Alta.	1.29	1.27	1.16	0.43	1.72	3.34	2.79	3.00	1.10	0.72	0.21	0.79	17.82	4.27	57.4
Granbrook, B.C.	1.98	1.59	1.69	0.93	0.88	1.04	1.61	0.54	0.32	1.23	0.30	1.85	13.96	-0.50	94.2
Nelson, B.C.	3.86	3.53	3.17	0.78	1.17	3.03	1.05	0.72	0.74	2.63	0.64	3.98	25.30	-3.22	125.1
Penticton, B.C.	2.46	0.74	0.77	0.02	0.18	2.00	1.29	0.69	0.50	0.66	0.23	0.47	10.01	-1.49	44.7
Prince George, B.C.	1.73	3.46	1.77	0.80	0.39	3.20	1.97	2.31	1.24	1.91	1.59	3.43	23.80	1.63	132.6
Victoria, B.C.	2.89	2.18	2.69	0.09	0.26	1.70	0.18	1.16	3.05	5.78	2.16	9.72	31.36	5.18	33.8
Dawson, Y.T.	0.31	0.39	0.16	0.11	0.77	1.01	3.92	2.27	0.33	1.78	0.99	0.72	13.02	-0.97	21.2
Coppermine, N.W.T.	0.36	0.04	0.26	--	0.06	0.84	1.80	2.90	0.98	0.39	0.19	0.21	8.03	-2.84	20.4
Port Good Hope, N.W.T.	1.17	0.51	0.22	--	0.70	1.03	4.08	2.45	1.03	0.88	1.84	0.62	14.53	2.35	39.2

¹Total rainfall plus one-tenth of the depth of newly fallen snow (see p. 30).

Section 2.—Standard Time and Time Zones

Standard time which was adopted at a World Conference held at Washington, D.C. in 1884, sets the number of time zones in the world at 24, each zone extending over one twenty-fourth of the surface of the earth and including all the territory between two meridians 15° longitude apart. The basis of world time is Greenwich time and all other time zones are a definite number of hours behind Greenwich.

Canada has seven time zones, the most easterly being Newfoundland standard time, three hours and thirty minutes behind Greenwich time. In the west, Pacific standard time, used throughout British Columbia and part of the Northwest Territories, is eight hours behind Greenwich, and Yukon standard time, used throughout the Yukon Territory, is nine hours behind Greenwich. Some municipalities adopt the time used by the local railways which, in certain cases, differs from the standard. There are also villages that adopt such time as seems best to suit their convenience but in general the legal boundaries of the different time zones are actually in use.

Daylight Saving Time.—For some years before World War I there was active propaganda, particularly in the cities, for the use during the summer months of an earlier time usually referred to as 'daylight saving time', one hour ahead of standard time. It was considered from the economic as well as from the health point of view that people in industrial towns and cities would gain by having longer periods of sunlight at their disposal for recreation. Canada adopted daylight saving time in 1918 but the Canadian Act lapsed at the end of that year. Since that date however most cities and towns have adopted daylight saving for varying periods in the summer months.

Legal Authority for the Time Zones.—Most of the regulations made in Canada concerning standard time have been passed by the provincial legislatures and the Northwest Territories Council. Legislation, besides determining the boundaries of zones, regulates such matters as the times of coming into effect or expiration of Acts, ordinances, contracts and agreements, times of opening and closing registration offices, law courts, post offices and other public offices, times of open or close seasons for hunting and fishing, and times of opening and closing business houses and places of amusement.

PART IV.—GEOPHYSICS AND ASTRONOMY

Section 1.—Geophysics

Geophysics began with the observations made by early navigators of the weather, ocean tides and the lodestone. These studies gradually developed into modern meteorology, physical oceanography and terrestrial magnetism. To them were added other physical studies of the earth so that geophysics now includes also seismology—the study of earthquakes; hydrology—the study of waters in rivers, lakes, glaciers and underground (but not in the oceans); volcanology—the study of volcanoes and the earth's heat; tectonophysics—the study of the forces which build mountains and slowly cause changes in level of land and sea; the study of the earth's gravity; and several minor studies such as the determination of the ages of ancient rocks and minerals from their content of radioactive elements. In addition magnetic, electrical, gravitational, seismic and radioactive methods of geophysical prospecting are used to direct drilling in almost all the searches going on in Canada for oil and gas. Both airborne and ground devices are widely used by mining companies to prospect for metals.

The Dominion Observatory and the Geological Survey at Ottawa and the Physics Department of the University of Toronto are carrying out major programs of geophysical research. Several other universities across the country and various provincial governments are also doing geophysical work and the major oil companies as well as numerous geophysical prospecting establishments have developed geophysical techniques as their most effective approach to the problem of finding oil fields and mineral deposits. A detailed study of these activities is given in the 1956 Year Book, pp. 42-55.

Of particular current interest is the organization of an international program of scientific work to be conducted during 1957 and 1958, known as the International Geophysical Year, which is designed to make a concentrated study of the physics of the earth and its atmosphere. This program and Canada's part in it is described in the following special article.

THE INTERNATIONAL GEOPHYSICAL YEAR*

Despite the fact that the earth is the only body in the universe which can be studied closely there is a great deal yet to be known about it. Man's position on the earth limits direct contact to a very thin layer on its surface and a thin layer in the lower atmosphere but knowledge of its structure and composition from the very hot centre to the outer limits of the atmosphere is requisite. To the geophysicist the earth is not solid firmament but a potent mass far from a condition of permanent stability. The crust folds and mountain ranges are formed then erode away by the action of a very dynamic atmosphere. Ice ages come and go and considerable masses of water are stored in the great glaciers and ice caps. Fortunately the more violent changes are slow in the life of man but the less violent such as earthquakes, storms in the atmosphere, and tides in the ocean are commonly experienced. Even these involve enormous energy changes.

Many of the things to be learned require synoptic or simultaneous measurements over the surface of the earth and these can be obtained only by international co-operation. The International Geophysical Year organization is merely an attempt by scientists to concentrate for a period of eighteen months starting July 1, 1957, on the type of measurements which, when taken at one epoch over all the world, can answer some of the questions about the structure and behaviour of the earth and its atmosphere.

For the sake of convenience and because of the natural division of geophysics into specialized studies, the program for the IGY is divided into fourteen disciplines:—

- | | |
|------------------------|---------------------------------------------|
| 1. World days | 8. Latitudes and Longitudes |
| 2. Meteorology | 9. Glaciology |
| 3. Geomagnetism | 10. Oceanography |
| 4. Aurora and Air Glow | 11. Rockets and Satellites |
| 5. Ionosphere Physics | 12. Seismology |
| 6. Solar Activity | 13. Gravity |
| 7. Cosmic Rays | 14. Radioactivity in the Earth's Atmosphere |

World days is not correctly called a discipline but, since the selection of days on which special measurements are to be taken required an international sub-committee parallel to those on other subjects, it is rightfully listed as important. The reason for selecting world days is that certain important types of measurements particularly in the upper atmosphere are too expensive and too difficult to carry out on a continuous or regular schedule. For instance, a great deal is learned about the upper atmosphere by firing rockets into it or releasing large free balloons carrying instruments to measure such things as temperature, pressure, density, radiation, the state of electrical conductivity, and chemical composition. The data are telemetered to ground stations as the measurements are made because recovery of the equipment is often impossible. The concentration of such expensive experiments into specially selected intervals is part of the plan. Ordinary meteorological stations each day release two radiosonde balloons of a size that will usually reach a height of about 50,000 feet. During selected world meteorological intervals, four or six a day will be released and larger balloons will be used to reach perhaps double that height.

Two kinds of world days have been planned. Those that can be selected in advance include regular world days (four per lunar month), eclipses, periods of unusual meteor activity, and world meteorological intervals (periods of ten days each quarter). The second type cannot be selected in advance and will be called on short notice when unusual solar activity causes effects in the upper atmosphere of particular interest. In some cases

* Prepared by Dr. D. C. Rose, Chairman of the Co-ordinating Committee, Canadian IGY Program, National Research Council, Ottawa.

periods of high probability of magnetic or ionospheric storms can be predicted by close observation of the sun. To watch it continuously, observatories scattered around the world must be in regular communication with the predicting and world-warning centre at Fort Belvoir, near Washington, D.C. The organizing of communications to the predicting centre and from it to all the stations needing the warning was no small task. When a disturbance is likely, an alert is announced followed by a special world interval of concerted study if the disturbance appears to justify it.

Everyone is familiar with problems in weather forecasting and, despite facetious remarks about the weather man, a knowledge of *Meteorology* is essential to air transport and to many industries. Meteorology is therefore a very dominant discipline in the IGY. The emphasis in the international program is on world-wide circulation of air and on a greater knowledge of the radiation budget or the exchange of energy between the earth and its atmosphere and between the earth and its atmosphere as a unit and the sun and sky. More extensive measurements in polar areas are important. The Canadian program involves enhanced observations at practically all the meteorological stations where balloon-borne radiosondes are sent up daily. The IGY list includes 46 such stations scattered fairly uniformly over all Canadian territory. Special radiation measurements are being taken at about 10 of the 46 stations and a detailed study of Arctic micro-meteorology is being made at Resolute in the far Arctic.

The important features of *Geomagnetism, the Aurora and Air Glow, Ionosphere Physics, and Solar Activity* can be discussed together. Clouds of particles and electromagnetic radiation are shot out in irregular bursts from the sun. The light and heat received from the sun is, on the whole, very steady but when the effects of ultra-violet light, X-rays and these clouds or beams of electrons and ionized atomic particles are examined they are found to be quite variable and the variability follows the well-known eleven-year cycle of sun-spot activity. The period 1957-58 was chosen for the IGY partly because it was expected to coincide with a maximum in solar activity.

Aurora occur more frequently during such periods than when the sun is quiet and abnormal ionospheric conditions are frequent at the same time. The ionosphere consists of reflecting layers of high electrical conductivity at heights between 50 and 200 miles in the atmosphere. It is of great commercial importance because most long-range radio communications depend on the reflection of radio waves from the various layers in the ionosphere. These layers vary in height and in electron density in regular ways with seasonal and diurnal periods, and with changes in solar activity, but superimposed on them are large fluctuations, very high ionospheric winds and the flow of electric currents high up in the atmosphere. The flow of electric currents represented by the motion of charged particles (which also cause the aurora) is influenced strongly by the earth's magnetic field and, in turn, distorts the earth's magnetic field causing the well-known magnetic storms.

An elaborate series of measurements, taken simultaneously, on the earth's magnetic field, on the occurrence, position and type of aurora, and on the ionosphere will give data from which much more may be learned about these phenomena which are important commercially as well as scientifically. To carry out the Canadian share of the observations, stations were established according to a plan to observe the aurora, the geomagnetic field and the ionosphere. The aurora belt or band of maximum frequency is roughly a circle of about 20° co-latitude from the geomagnetic pole. Churchill, Man., is in the centre of this band and a chain of stations north and south from Churchill was chosen. This chain starts at Alert (the most northerly part of Canada about 500 miles from the North Pole) and extends south to Winnipeg. In addition to Alert and Winnipeg, it includes Resolute, Baker Lake, Ennadai Lake, Churchill, Bird, and The Pas. Another chain extends westward and includes Yellowknife, N.W.T., Meanook, Alta., and Victoria, B.C. Saskatoon, Sask., is also an important centre for the measurement of these upper-atmosphere phenomena.



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Cosmic Rays, the seventh discipline, is interesting because the energetic particles known as cosmic rays come mostly from interstellar space but also in occasional bursts from the sun. They are deflected by the earth's magnetic field and apparently by clouds of conducting gas at distances from the earth probably within the range of the solar system.

Latitude and Longitude studies deal with the motions of the earth and its exact size and shape. The exact position of the Poles and the rate of rotation vary slightly and a study of these is important. New techniques for astronomical position-fixing make it possible to secure more accurate dimensions of the earth.

Glaciology and Oceanography deal with the great areas of water storage on the earth. The existence of glaciers and the currents in oceans have profound effects on climates. The balance between water storage in ice caps and glaciers and in the oceans is quite critical and a change in this balance is one of the important slowly varying physical features of the planet. The Canadian program in glaciology includes an expedition to northern Ellesmere Island where the ice cap will be studied, an expedition to the Salmon Glacier in British Columbia and a snow and ice survey as widely spread over Canada as is possible. Oceanographic stations at St. Andrews, N.B., and Nanaimo, B.C., will take part in international deep ocean current surveys in the Atlantic and Pacific.

Perhaps the most spectacular experiments during the IGY are those that will be carried out in *Rockets and Satellites*. The firing of these is really only a means of sending measuring instruments to the outer limits of the atmosphere so that more may be learned about the space surrounding this planet. Instruments will be carried to measure such phenomena as the composition of the residual gas and the nature of solar and other radiation. The organization required to fire rockets and to get satellites on stable orbits, then to receive the data from them by radio, is sufficiently involved to justify listing this as a separate discipline. Canada has no rocket or satellite program, but the United States is carrying out extensive rocket firing at Churchill, Man., and Canada's Defence Research Laboratories are co-operating with United States scientists in this work.

Seismology and Gravity are two disciplines that have been organized on an international scale for many years. They were included in the IGY plan largely because expeditions to the Antarctic and other remote points made it possible to add stations to the existing net. The Canadian seismological station at Resolute, N.W.T., which has been in operation since 1950, is considered one of the most important in the world.

Radioactivity in the Earth's Atmosphere was added officially as an IGY discipline in 1956. The natural radioactivity in the atmosphere has been known for many years but a world-wide survey has never been conducted. Added to the natural radioactivity there is radioactive dust carried in the atmosphere after each atomic explosion which will take years to fall out. Questions to be answered include: how much is there and at what height it is carried, what are the physical processes in its falling out, and how it is being brought down with precipitation.

Historically, this International Geophysical Year is the third co-operative effort of this sort. The first two (1882-83 and 1932-33) were International Polar Years. In the first, Canadian science, being very young, took little part though there were three expeditions into northern Canada—one British, one German and one American. In the second there were five Canadian stations in northern Canada and one established there by the United Kingdom.

The organization of the international program is handled by a committee formed by the International Council of Scientific Unions, having headquarters and an executive office at Uccle, Belgium. It is known as the Comité Spécial de l'Année Géophysique Internationale (CSAGI). The Committee, composed of representatives from seven International Scientific Unions, is supported by an Advisory Council for the IGY which meets with the Committee and has representatives from the various co-operating nations. The

CSAGI acts as a co-ordinating headquarters and information centre. Sub-committees organized in the various disciplines work out uniform techniques for the world-wide measurements and endeavour to secure as complete coverage as possible.

In Canada, a Canadian National Committee was organized in 1953 as a sub-committee of the National Research Council's Associate Committee on Geodesy and Geophysics. This Committee, which included university and government scientists active in the various disciplines, drew up a proposed program and in 1955 recommended the formation of a small executive or co-ordinating committee to put that program into operation. The Co-ordinating Committee now consists of Dr. C. S. Beals, Dominion Astronomer, Mr. F. T. Davies, Defence Research Board, and Dr. D. W. R. McKinley and Dr. D. C. Rose of the National Research Council. Dr. Rose is Chairman of both Committees. The Canadian program is financed by the various government departments concerned with the activities involved including Mines and Technical Surveys, Transport, National Defence, Fisheries Research Board and the National Research Council. A number of Canadian universities are undertaking an important part in the program and are aided in doing so by assisted research grants from the National Research Council. As in the international organization, the Canadian program is one of co-operation among many scientific groups.

Section 2.—Astronomy

The modern era of astronomy in Canada may be said to have begun in 1905 with the completion of the Dominion Observatory, the national observatory of Canada. Prior to that an astronomical observatory established in 1851 at Fredericton, N.B., was used for a short time to determine the longitude of that centre and for general astronomical purposes; it has recently been rehabilitated as a historic monument. Other small observatories were established, one at Quebec City in 1854 and one at Kingston in 1875. Astronomical instruments were to be associated with the Magnetic Observatory built by the British Government at Toronto in 1839 but there is no record of them being set up until 1881. A small observatory established at McGill University in 1879 was used for many years for time observations.

Today the science of astrophysics is carried on mainly by three Canadian institutions: the Dominion Observatory at Ottawa, Ont., the Dominion Astrophysical Observatory at Victoria, B.C., both of which are administered by the Department of Mines and Technical Surveys, and the David Dunlap Observatory associated with the University of Toronto. Of the two Government institutions, the Dominion Observatory at Ottawa specializes mainly in the astronomy of position, in solar physics and in various branches of geophysical work, while the major effort in astrophysics is concentrated at the Dominion Astrophysical Observatory at Victoria. The David Dunlap Observatory, founded in 1935, is equipped with very fine astrophysical instruments of a kind similar to those in use at Victoria. It performs not only the functions of a privately financed and administered research institution but is also the nucleus of the Department of Astronomy at Toronto University. In addition to the work of these three major institutions and a number of smaller observatories, investigations in the field of radio astronomy are conducted by the National Research Council, Ottawa.

CHAPTER II.—CONSTITUTION AND GOVERNMENT

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

PART I.—CONSTITUTION OF CANADA

The Canadian federal state was established by the British North America Act, 1867, which united the three British North American provinces of Canada, New Brunswick and Nova Scotia into one country, divided into four provinces, namely, Ontario, Quebec, New Brunswick and Nova Scotia. British Columbia entered the Union in 1871 and Prince Edward Island in 1873. The Province of Manitoba was created in 1870 and the Provinces of Saskatchewan and Alberta in 1905 out of portions of the territories formerly held by the Hudson's Bay Company which had been admitted to the Union in 1870. Newfoundland entered the Union in 1949. Canada now consists of ten provinces and two territories known as the Yukon Territory and the Northwest Territories.

The British North America Act of 1867 divided both legislative and executive authority between Canada and the provinces. Judicial authority was not similarly divided, federal and provincial courts having jurisdiction with respect to both federal and provincial laws.

Although the British North America Act of 1867 and its subsequent amendments is popularly regarded as the Constitution of Canada, it is not an exhaustive statement of the laws and rules by which Canada is governed. The Constitution of Canada in its broadest sense includes other statutes of the United Kingdom Parliament (e.g., the Statute of Westminster, 1931), statutes of the Parliament of Canada relating to such matters as the succession to the Throne, the demise of the Crown, the Governor General, the Senate, the House of Commons, electoral districts, elections, Royal Style and Titles, and also statutes of provincial legislatures relating to provincial government and provincial legislative assemblies. Other written instruments such as the Royal Proclamation of 1763, early instructions to Governors, Letters Patent creating the offices of Governors and

1.—Provinces and Territories of Canada, Dates of Admission to Confederation, Legislative Processes by which Admission was Effected and Present Areas

Province, Territory or District	Date of Admission or Creation	Legislative Process	Present Area (sq. miles)
Ontario ¹	July 1, 1867	} Act of Imperial Parliament—The British North America Act, 1867 (30-31 Vict., c. 3), and Imperial Order in Council, May 22, 1867.	412,582
Quebec ²	July 1, 1867		594,860
Nova Scotia.....	July 1, 1867		21,068
New Brunswick.....	July 1, 1867		27,985
Manitoba ³	July 15, 1870	Manitoba Act, 1870 (33 Vict., c. 3) and Imperial Order in Council, June 23, 1870.....	251,030
British Columbia.....	July 20, 1871	Imperial Order in Council, May 16, 1871.....	366,255
Prince Edward Island.....	July 1, 1873	Imperial Order in Council, June 26, 1873.....	2,184
Saskatchewan ⁴	Sept. 1, 1905	Saskatchewan Act, 1905 (4-5 Edw. VII, c. 42).....	251,700
Alberta ⁴	Sept. 1, 1905	Alberta Act, 1905 (4-5 Edw. VII, c. 3).....	255,285
Newfoundland.....	Mar. 31, 1949	The British North America Act, 1949 (12-13 Geo. VI, c. 22).....	156,185
Northwest Territories ⁵	July 15, 1870	Act of Imperial Parliament—Rupert's Land Act, 1868 (31-32 Vict., c. 105), and Imperial Order in Council, June 23, 1870.....	1,304,903
Mackenzie ⁶	Jan. 1, 1920	} Order in Council, Mar. 16, 1918.....	527,490
Keewatin ⁶	Jan. 1, 1920		228,160
Franklin ⁶	Jan. 1, 1920		549,263
Yukon Territory ⁷	June 13, 1898	Yukon Territory Act, 1898 (61 Vict., c. 6).....	207,076
Canada.....			3,851,113

¹ The area of Ontario was extended by the Ontario Boundaries Extension Act, 1912 (2 Geo. V, c. 40).

² Extended by Quebec Boundaries Extension Act, 1912 (2 Geo. V, c. 45) and diminished Mar. 1, 1927 in consequence of the Award of the Judicial Committee of the British Privy Council whereby approximately 112,000 sq. miles of territory (formerly considered as part of Quebec) was assigned to Newfoundland.

³ Extended by the Extension of Boundaries Act of Manitoba, 1881, and the Manitoba Boundaries Extension Act, 1912 (2 Geo. V, c. 32).

⁴ Saskatchewan and Alberta created as provinces in 1905 from the area formerly comprised in the provisional Districts of Assiniboia, Athabasca, Alberta and Saskatchewan established May 17, 1882, by minute of Canadian Privy Council concurred in by Dominion Parliament and Order in Council, Oct. 2, 1895.

⁵ By an Imperial Order in Council passed on June 23, 1870 pursuant to the Rupert's Land Act, 1868 (31-32 Vict., c. 105) the former territories of the Hudson's Bay Company known as Rupert's Land and the North-Western Territory were transferred to Canada effective July 15, 1870. These territories were designated as the North-West Territories by the Act of 32-33 Vict., c. 3 and as the Northwest Territories by R.S.C. 1906, c. 62. By Imperial Order in Council of July 31, 1880 (effective Sept. 1, 1880) all British territories and possessions in North America not already included within Canada and all islands adjacent thereto (with the exception of the Colony of Newfoundland and its dependencies) were annexed to Canada and these additional territories were formally included in the North-West Territories by 4-5 Edw. VII, c. 27. The Province of Manitoba was formed out of a portion of the territories by the Manitoba Act, 1870 (33 Vict., c. 3) and a further portion was added to Manitoba in 1881 by 44 Vict., c. 14. The Provinces of Alberta and Saskatchewan were formed out of portions of the territories in 1905 and in 1912 other portions were added to Manitoba, Ontario and Quebec.

⁶ By 39 Vict., c. 21, a separate district to be known as the District of Keewatin was established and provision was made for the local government thereof. The Act was expressed to come into force by proclamation. It provided that portions of the District might be re-annexed to the North-West Territories by proclamation; in 1886 a portion of the District of Keewatin was re-annexed and in 1905 the entire Keewatin District was re-annexed. The Act of 39 Vict. was never proclaimed. By Order in Council of May 8, 1882 the provisional districts of Assiniboia, Saskatchewan, Alberta and Athabasca were created for the convenience of settlers and for postal purposes. By Order in Council of Oct. 2, 1895 the further provisional districts of Ungava, Franklin, Mackenzie and Yukon were created. The boundaries of these provisional districts were re-defined by Order in Council of Dec. 18, 1897. Subsequently the Yukon Territory was formed, the Provinces of Alberta and Saskatchewan were created and other portions of the territories were annexed to Quebec, Ontario and Manitoba. By Order in Council, dated Mar. 16, 1918 (effective Jan. 1, 1920) the remaining portions of the Northwest Territories were divided into three provisional districts known as Mackenzie, Keewatin and Franklin.

⁷ The provisional District of Yukon established in 1895 was created a judicial district of the North-West Territories by proclamation issued pursuant to Sect. 51 of the North-West Territories Act (R.S.C. 1886, c. 50) on Aug. 16, 1897 and by the Yukon Territory Act (61 Vict., c. 6) was declared to be a separate Territory.

Governors General, and Orders in Council passed pursuant to the British North America Act also form part of the Canadian constitutional system. In addition the Constitution of Canada includes well established usages and conventions. The preamble to the British North America Act states that it was the desire of the original provinces to be united "with a constitution similar in principle to that of the United Kingdom" and, accordingly, many of the usages and conventions of government that have been developed in the United Kingdom over the centuries are followed in Canada. For example, the Cabinet system of responsible government as developed in the United Kingdom obtains in Canada although no mention thereof is made in the British North America Act.

No provision was made in the British North America Act of 1867 for amendment thereof by any legislative authority in Canada but both the Parliament of Canada and the provincial legislatures were given legislative jurisdiction with respect to some matters relating to government. Thus, for example, the Parliament of Canada was given jurisdiction with respect to the establishment of electoral districts and election laws and the privileges and immunities of Members of the House of Commons and the Senate, and each provincial legislature was empowered to amend the constitution of the province except as regards the office of Lieutenant-Governor. By an amendment to the British North America Act passed in 1949 the authority of the Parliament of Canada to legislate with respect to constitutional matters was considerably enlarged and it may now amend the Constitution of Canada except as regards the legislative authority of the provinces, the rights and privileges of provincial legislatures or governments, schools, the use of the English or the French language, and the duration of the House of Commons other than in time of real or apprehended war, invasion or insurrection.

Canada's Status in the Commonwealth of Nations.*—The several stages in the development of the status of Canada have been authoritatively described in the reports of successive Imperial Conferences including that held at London in 1926 which defined the group of self-governing communities consisting of the United Kingdom and the Dominions as "autonomous communities within the British Empire, equal in status, in no way subordinate one to another in any aspect of their domestic or external affairs, though united by a common allegiance to the Crown, and freely associated as members of the British Commonwealth of Nations". That Conference also recognized that, as a consequence of this equality of status, the Governor General of a Dominion "is the representative of the Crown, holding in all essential respects the same position in relation to the administration of public affairs in the Dominion as is held by His Majesty the King in Great Britain", and that "it is the right of the Government of each Dominion to advise the Crown in all matters relating to its own affairs". Simultaneously with this change in the constitutional relationship between the several parts of the British Commonwealth of Nations there developed as a complementary aspect of nationhood the assumption by the several Dominions of further responsibilities and rights of sovereign States in their relations with other members of the community of nations. Membership in the League of Nations and more recently in the United Nations, the exercise of treaty-making powers and the establishment of separate diplomatic representation in a number of foreign countries have characterized this phase in the growth of Canada. More explicit recognition of the implications of the principles of equality of status was accorded in the Statute of Westminster of 1931 which provided for the removal of the remaining limitations on the legislative autonomy of the Commonwealth nations.

Thus Canada, under the Crown, has equality of status with the United Kingdom and the other Commonwealth nations in both domestic and foreign affairs; its Government advises the Crown in the person of the Governor General on all matters relating to Canada. Canada has membership in the United Nations; makes its own treaties; appoints its own ambassadors and other representatives abroad; levies its own taxes; makes its own laws which are executed by a government dependent on the will of a majority of the people; and maintains its own naval, military and air forces. In short, Canada has achieved full status of democratic nationhood within the Commonwealth of Nations.

* For a more detailed account see 1952-53 Year Book, pp. 101-104.

PART II.—MACHINERY OF GOVERNMENT

Section 1.—The Federal Government

Subsection 1.—The Executive

The Crown.—The British North America Act provides that “the Executive Government and authority of and over Canada is . . . vested in the Queen”. The functions of the Crown, which are substantially the same as those of the Queen in relation to the Government of the United Kingdom, are discharged in Canada by the Governor General in accordance with established principles of responsible government. The practical executive functions of government are exercised by the Cabinet.

The Queen.—The personal participation of the Queen in the functions of the Crown in Canada has been limited to such occasions as the granting of honours and awards, approval of changes in the Table of Precedence, institution of new military awards, or the periodic appointment of a Governor General. On the occasion of a royal visit, the Queen may participate in those ceremonies which otherwise are carried out in her name, such as the opening and dissolution of Parliament, the assent to Bills, and the granting of a general amnesty.

Apart from her constitutional position in relation to the various governments of the Commonwealth countries the Queen is Head of the Commonwealth and symbolizes the association of the member countries. Until 1953 the title of the Queen was the same throughout the Commonwealth. Constitutional developments put the title somewhat out of accord with the facts of the position and in December 1952 it was decided by the Prime Ministers of the Commonwealth countries meeting at London, Eng., that new forms of title for each country should be devised. The title for Canada was approved by Parliament and established by a Royal Proclamation on May 29, 1953. The title of the Queen, so far as Canada is concerned, now is:—

“Elizabeth the Second, by the grace of God of the United Kingdom, Canada and her other realms and territories Queen, Head of the Commonwealth, Defender of the Faith”.

The Governor General.—The Governor General, appointed by the Queen as her personal representative on the advice of the Prime Minister of Canada, traditionally serves for a term of five years. He exercises the executive authority of the Queen in relation to the Government of Canada under new Letters Patent issued under the Great Seal of Canada (effective Oct. 1, 1947) and the provisions of the British North America Acts 1867 to 1952. Acting under the recommendations of his responsible Ministers, in the Queen's name, he summons, prorogues, and dissolves Parliament and assents to Bills and exercises other executive functions.

The Governor General's annual salary and allowances provided by the Parliament of Canada are respectively \$48,666 and \$100,000. In addition there are other expenses of office, including the salary of the Governor General's secretary.

The present Governor General is styled His Excellency the Right Honourable Vincent Massey, C.H.

2.—Governors General of Canada since Confederation, 1867

Name	Date of Appointment	Date of Assumption of Office
VISCOUNT MONCK, G.C.M.G.....	June 1, 1867	July 1, 1867
LORD LISGAR, G.C.M.G.....	Dec. 29, 1868	Feb. 2, 1869
The EARL OF DUFFERIN, K.P., K.C.B., G.C.M.G.....	May 22, 1872	June 25, 1872
The MARQUIS OF LORNE, K.T., G.C.M.G.....	Oct. 5, 1878	Nov. 25, 1878
The MARQUIS OF LANSDOWNE, G.C.M.G.....	Aug. 18, 1883	Oct. 23, 1883
LORD STANLEY OF PRESTON, G.C.B.,.....	May 1, 1888	June 11, 1888
The EARL OF ABERDEEN, K.T., G.C.M.G.....	May 22, 1893	Sept. 18, 1893
The EARL OF MINTO, G.C.M.G.....	July 30, 1898	Nov. 12, 1898
EARL GREY, G.C.M.G.....	Sept. 26, 1904	Dec. 10, 1904
FIELD MARSHAL H. R. H. The DUKE OF CONNAUGHT, K.G.....	Mar. 21, 1911	Oct. 13, 1911
The DUKE OF DEVONSHIRE, K.G., G.C.M.G., G.C.V.O.....	Aug. 19, 1916	Nov. 11, 1916

2.—Governors General of Canada since Confederation, 1867—concluded

Name	Date of Appointment	Date of Assumption of Office
GENERAL THE LORD BYNG OF VIMY, G.C.B., G.C.M.G., M.V.O.....	Aug. 2, 1921	Aug. 11, 1921
VISCOUNT WILLINGDON OF RATTON, G.C.S.I., G.C.I.E., G.B.E.....	Aug. 5, 1926	Oct. 2, 1926
THE EARL OF BESSBOROUGH, G.C.M.G.....	Feb. 9, 1931	Apr. 4, 1931
LORD TWEEDSMUIR OF ELSFIELD, G.C.M.G., G.C.V.O., C.H.....	Aug. 10, 1935	Nov. 2, 1935
MAJOR-GENERAL THE EARL OF ATHLONE, K.G., P.C., G.C.B., G.C.M.G., G.C.V.O., D.S.O.....	Apr. 3, 1940	June 21, 1940
FIELD MARSHAL VISCOUNT ALEXANDER OF TUNIS, K.G., G.C.B., G.C.M.G., C.S.I., D.S.O., M.C., A.D.C.....	Aug. 1, 1945	Apr. 12, 1946
THE RIGHT HONOURABLE VINCENT MASSEY, C.H.....	Jan. 24, 1952	Feb. 28, 1952

The Cabinet.—The Cabinet is a committee of Ministers chosen by the Prime Minister generally from Members of Parliament. By convention, all members of the Cabinet must either have seats in Parliament or secure seats within a short time and again by convention all Ministers in charge of departments of government must be members of the House of Commons. It is customary for the Leader of the Government in the Senate to be a member of the Cabinet. Ministers without Portfolio can be members of either House.

The Cabinet, under the leadership of the Prime Minister, directs the business of the Commons, initiates nearly all public Bills placed before Parliament, and has complete responsibility for the initiation of taxes and the recommendation of expenditures. Following established precedent or convention, it is always responsible to the Commons. When the Cabinet (the Government) suffers the defeat of a Government Bill or a vote of censure or of want of confidence in the Commons, which may call the Government to account at any time, the existing Government or Cabinet must either resign or request a dissolution from the Governor General. If it resigns, the Governor General calls on the Leader of the Opposition in the Commons to form a new Government. Alternatively, if the Government which has been defeated in the House is granted a dissolution and is defeated in the ensuing general election then, depending on the number of members returned, (1) the Government may decide to remain in office and seek a vote of confidence in the House when it meets; or (2) the Government may decide to resign immediately with the consequent result that the Governor General will ask the leader of the party with the highest number of members returned to form a new Government.

The primary responsibility of the Governor General in either of the above circumstances is to provide the nation with a Cabinet or Ministry capable of conducting Her Majesty's Government with the support of Parliament.

Although appointed by the Governor General, Cabinet members are selected by the Prime Minister from among his party colleagues in such manner as to ensure, as far as possible, representation of the several geographical and political regions of the country and its principal ethnic, religious and social interests. Each Cabinet Minister generally assumes charge of one of the departments of government, although a Minister may hold more than one portfolio at the same time or he may hold one or more portfolios and one or more acting portfolios or a Minister without Portfolio may hold one or more acting portfolios. In his acting capacity, the Minister exercises the same authority as if he were the Minister of the department.

3.—Prime Ministers since Confederation, 1867

Ministry	Prime Minister	Length of Administration
1	Rt. Hon. Sir JOHN ALEXANDER MACDONALD.....	July 1, 1867 - Nov. 5, 1873
2	Hon. ALEXANDER MACKENZIE.....	Nov. 7, 1873 - Oct. 16, 1878
3	Rt. Hon. Sir JOHN ALEXANDER MACDONALD.....	Oct. 17, 1878 - June, 6, 1891
4	Hon. Sir JOHN JOSEPH CALDWELL ABBOTT.....	June 16, 1891 - Nov. 24, 1892
5	Rt. Hon. Sir JOHN SPARROW DAVID THOMPSON.....	Dec. 5, 1892 - Dec. 12, 1894
6	Hon. Sir MACKENZIE BOWELL.....	Dec. 21, 1894 - Apr. 27, 1896
7	Hon. Sir CHARLES TUPPER.....	May 1, 1896 - July 8, 1896
8	Rt. Hon. Sir WILFRID LAURIER.....	July 11, 1896 - Oct. 6, 1911
9	Rt. Hon. Sir ROBERT LAIRD BORDEN.....	Oct. 10, 1911 - Oct. 12, 1917 (Conservative Administration)

3.—Prime Ministers since Confederation, 1867—concluded

Ministry	Prime Minister	Length of Administration
10	Rt. Hon. Sir ROBERT LAIRD BORDEN.....	Oct. 12, 1917 - July 10, 1920 (Unionist Administration)
11	Rt. Hon. ARTHUR MEIGHEN.....	July 10, 1920 - Dec. 29, 1921 (Unionist—"National Liberal and Conservative Party")
12	Rt. Hon. WILLIAM LYON MACKENZIE KING.....	Dec. 29, 1921 - June 28, 1926
13	Rt. Hon. ARTHUR MEIGHEN.....	June 29, 1926 - Sept. 25, 1926
14	Rt. Hon. WILLIAM LYON MACKENZIE KING.....	Sept. 25, 1926 - Aug. 6, 1930
15	Rt. Hon. RICHARD BEDFORD BENNETT.....	Aug. 7, 1930 - Oct. 23, 1935
16	Rt. Hon. WILLIAM LYON MACKENZIE KING.....	Oct. 23, 1935 - Nov. 15, 1948
17	Rt. Hon. LOUIS STEPHEN ST. LAURENT.....	Nov. 15, 1948 - June 21, 1957
18	Rt. Hon. JOHN GEORGE Diefenbaker.....	June 21, 1957 - ...

4.—Members of the Eighteenth Ministry as at Oct. 15, 1957

(According to precedence of Ministers)

NOTE.—A complete list of the members of Federal Ministries from Confederation to 1913 appears in the 1912 Year Book, pp. 422-429. Later Ministries will be found in subsequent editions.

Office	Occupant	Date of First Appointment ¹	Date of Appointment to Present Portfolio
Prime Minister.....	Rt. Hon. JOHN GEORGE Diefenbaker.....	June 21, 1957	June 21, 1957
Minister of Public Works and Acting Minister of Defence Production.....	Hon. HOWARD CHARLES GREEN.....	June 21, 1957	June 21, 1957
Minister of Finance and Receiver General.....	Hon. DONALD METHUEN FLEMING.....	June 21, 1957	June 21, 1957
Minister of Veterans Affairs.....	Hon. ALFRED JOHNSON BROOKS.....	June 21, 1957	June 21, 1957
Minister of Transport.....	Hon. GEORGE HEES.....	June 21, 1957	June 21, 1957
Solicitor General.....	Hon. LEON BALCER.....	June 21, 1957	June 21, 1957
Minister of National Defence.....	Hon. GEORGE RANDOLPH PEARKES.....	June 21, 1957	June 21, 1957
Minister of Trade and Commerce.....	Hon. GORDON MINTO CHURCHILL.....	June 21, 1957	June 21, 1957
Minister of Justice and Attorney General and Acting Minister of Citizenship and Immigration.....	Hon. EDMUND DAVIE FULTON.....	June 21, 1957	June 21, 1957
Minister of National Revenue.....	Hon. GEORGE CLYDE NOWLAN.....	June 21, 1957	June 21, 1957
Minister of Agriculture.....	Hon. DOUGLAS SCOTT HARKNESS.....	June 21, 1957	Aug. 7, 1957
Secretary of State.....	Hon. ELLEN LOUIS FAIRCLOUGH.....	June 21, 1957	June 21, 1957
Minister of Fisheries.....	Hon. J. ANGUS MACLEAN.....	June 21, 1957	June 21, 1957
Minister of Labour.....	Hon. MICHAEL STARR.....	June 21, 1957	June 21, 1957
Postmaster General.....	Hon. WILLIAM MCLEAN HAMILTON.....	June 21, 1957	June 21, 1957
Minister without Portfolio.....	Hon. JAMES MACKERRAS MACDONNELL.....	June 21, 1957	June 21, 1957
Minister without Portfolio.....	Hon. WILLIAM J. BROWNE.....	June 21, 1957	June 21, 1957
Minister of Mines and Technical Surveys.....	Hon. PAUL COMTOIS.....	Aug. 7, 1957	Aug. 7, 1957
Minister of National Health and Welfare.....	Hon. JAY WALDO MONTEITH.....	Aug. 22, 1957	Aug. 22, 1957
Minister of Northern Affairs and National Resources.....	Hon. FRANCIS ALVIN GEORGE HAMILTON.....	Aug. 22, 1957	Aug. 22, 1957
Secretary of State for External Affairs.....	Hon. SIDNEY EARLE SMITH.....	Sept. 13, 1957	Sept. 13, 1957
Leader of the Government in the Senate and Minister without Portfolio.....	Hon. JOHN THOMAS HAIG.....	Oct. 9, 1957	Oct. 9, 1957

¹ Appointee was not necessarily sworn in on date given.

Administrative duties in the various departments of government became so burdensome during World War II that Parliamentary Assistants were appointed to assist six Cabinet Ministers with their Parliamentary duties. The practice was extended after the War and at Oct. 15, 1957, there were 12 Parliamentary Assistants, as follows:—

To Prime Minister.....	WALLACE BICKFORD NESSITT
To Minister of Agriculture.....	JOHN A. CHARLTON
To Minister of National Health and Welfare.....	G. ERNEST HALPENNY
To Minister of Labour.....	ARTHUR MALONEY
To Minister of Public Works.....	CLAYTON W. HODGSON
To Mines and Technical Surveys.....	RAYMOND O'HURLEY
To Minister of Trade and Commerce.....	THOMAS M. BELL
To Minister of Transport.....	ANGUS R. MACDONALD
To Minister of Veterans Affairs.....	WALTER DINSDALE
To Minister of Justice.....	DAVID J. WALKER
To Minister of Finance.....	RICHARD A. BELL
To Minister of National Defence.....	MARSHALL LAMBERT

The Privy Council.—The Queen's Privy Council for Canada is composed of eighty to ninety members who are sworn of the Council by the Governor General on the advice of the Prime Minister and who retain membership for life. The Council consists chiefly of present and former Ministers of the Crown. It seldom meets as a body and its constitutional responsibilities as adviser to the Crown in respect to Canada are performed exclusively by a committee thereof consisting of the Ministers who constitute the Cabinet of the day and are also members of the Queen's Privy Council for Canada.

5.—Members of the Queen's Privy Council for Canada According to Seniority Therein as at Oct. 15, 1957

NOTE.—In this list the prefix "The Rt. Hon." indicates membership in the United Kingdom Privy Council. Clerk of the Privy Council and Secretary to the Cabinet, R. B. BRYCE; Assistant Clerk of the Privy Council, A. M. HILL.

Member ¹	Date When Sworn In	Member ¹	Date When Sworn In
The Rt. Hon. ARTHUR MEIGHEN.....	Oct. 2, 1915	The Hon. LESTER BOWLES PEARSON...	Sept. 10, 1948
The Hon. ESIOFF LEON PATENAUDE...	Oct. 6, 1915	The Hon. STUART SINCLAIR GARSON...	Nov. 15, 1948
The Hon. ALBERT SEVIGNY.....	Jan. 8, 1917	The Hon. ROBERT HENRY WINTERS...	Nov. 15, 1948
The Hon. THOMAS ALEXANDER CRERAR	Oct. 12, 1917	The Hon. FREDERICK GORDON BRAD-	
The Hon. HENRY HERBERT STEVENS...	Sept. 21, 1921	LEY.....	Apr. 1, 1949
The Hon. EDWARD JAMES McMURRAY	Nov. 14, 1923	The Hon. CHARLES JOST BURCHELL...	Apr. 1, 1949
The Rt. Hon. CHARLES VINCENT		The Hon. GASPARD FAUTEUX.....	May 16, 1949
MASSEY.....	Sept. 16, 1925	The Hon. HUGUES LAPOINTE.....	Aug. 25, 1949
The Hon. CHARLES AVERY DUNNING...	Mar. 1, 1926	The Hon. GABRIEL EDOUARD RINFRET.	Aug. 25, 1949
The Hon. WILLIAM DAUM EULER.....	Sept. 25, 1926	The Hon. WALTER EDWARD HARRIS...	Jan. 18, 1950
H.R.H. THE DUKE OF WINDSOR.....	Aug. 2, 1927	The Hon. GEORGE PRUDHAM.....	Dec. 13, 1950
The Hon. ARTHUR CHARLES HARDY...	July 31, 1930	The Hon. GEORGE BLACK.....	Aug. 3, 1951
The Hon. DONALD MATHESON SUTHER-		EARL ALEXANDER OF TUNIS.....	Jan. 29, 1952
LAND.....	Aug. 7, 1930	The Hon. JAMES SINCLAIR.....	Oct. 15, 1952
The Hon. THOMAS GEROW MURPHY...	Aug. 7, 1930	The Hon. RALPH OSBORNE CAMPNEY...	Oct. 15, 1952
The Hon. WILLIAM DUNCAN HERRIDGE	June 17, 1931	The Hon. WILLIAM ROSS MACDONALD...	May 12, 1953
The Hon. SAMUEL GOREIL.....	Aug. 14, 1935	The Hon. GEORGE ALEXANDER DREW...	May 12, 1953
The Hon. LUCIEN HENRI GENDRON...	Aug. 30, 1935	The Hon. JOHN WHITNEY PICKERSGILL	June 12, 1953
The Hon. WILLIAM EARL ROWE.....	Aug. 30, 1935	The Rt. Hon. THIBAUDEAU RINFRET...	Sept. 16, 1953
The Hon. ONESIME GAGNON.....	Aug. 30, 1935	The Hon. JEAN LESAGE.....	Sept. 17, 1953
The Hon. CHARLES GAVAN POWER...	Oct. 23, 1935	The Hon. PATRICK KERWIN.....	July 1, 1954
The Rt. Hon. JAMES LORIMER LISLEY...	Oct. 23, 1935	The Hon. GEORGE CARLYLE MARLER...	July 1, 1954
The Hon. JOSEPH ENOIL MICHAUD...	Oct. 23, 1935	The Hon. ROCH PINARD.....	July 1, 1954
The Rt. Hon. CLARENCE DECATUR		The Hon. HERBERT J. SYMINGTON...	Nov. 26, 1956
HOWE.....	Oct. 23, 1935	The Hon. LOUIS RENE BEAUDOIN...	Apr. 15, 1957
The Rt. Hon. JAMES GARFIELD GARD-		The Hon. PAUL THEODORE HELLYER...	Apr. 26, 1957
INER.....	Nov. 4, 1935	The Rt. Hon. JOHN GEORGE	
The Hon. JAMES ANGUS MACKINNON...	Jan. 23, 1939	DIEPENBAKER ²	June 21, 1957
The Hon. COLIN WILLIAM GEORGE		The Hon. HOWARD CHARLES GREEN ² ...	June 21, 1957
GIBSON.....	July 8, 1940	The Hon. DONALD METHUEN FLEMING ²	June 21, 1957
The Hon. JOSEPH THORARINN THORSON	June 11, 1941	The Hon. ALFRED JOHNSON BROOKS ² ...	June 21, 1957
The Hon. WILLIAM FERDINAND AL-		The Hon. GEORGE HEES ²	June 21, 1957
PHONSE TURGEON.....	Oct. 8, 1941	The Hon. LEON BALZER.....	June 21, 1957
The Rt. Hon. LOUIS STEPHEN ST.		The Hon. GEORGE RANDOLPH PEAKES ²	June 21, 1957
LAURENT.....	Dec. 10, 1941	The Hon. GORDON MINTO CHURCHILL ²	June 21, 1957
The Rt. Hon. SIR WINSTON LEONARD		The Hon. EDMUND DAVIE FULTON ² ...	June 21, 1957
SPENCER CHURCHILL.....	Dec. 29, 1941	The Hon. GEORGE CLYDE NOWLAN ² ...	June 21, 1957
The Hon. ALPHONSE FOURNIER.....	Oct. 7, 1942	The Hon. DOUGLAS SCOTT HARKNESS ² ...	June 21, 1957
The Hon. ERNEST BERTRAND.....	Oct. 7, 1942	The Hon. ELLEN LOUIS FAIRCLOUGH ² ...	June 21, 1957
The Hon. BROOKE CLAXTON.....	Oct. 13, 1944	The Hon. J. ANGUS McLEAN ²	June 21, 1957
The Hon. ANDREW GEORGE LATTA		The Hon. MICHAEL STARR ²	June 21, 1957
McNAUGHTON.....	Nov. 2, 1944	The Hon. WILLIAM McLEAN HAMILTON ²	June 21, 1957
The Hon. GEORGE ARTHUR JEAN.....	Apr. 18, 1945	The Hon. JAMES MACKERRAS MAC-	
The Hon. LIONEL CHEVRIER.....	Apr. 18, 1945	DONNELL ²	June 21, 1957
The Hon. PAUL JOSEPH JAMES MARTIN	Apr. 18, 1945	The Hon. WILLIAM J. BROWNE ²	June 21, 1957
The Hon. DOUGLAS CHARLES ABBOTT...	Apr. 18, 1945	The Hon. PAUL COMTOIS ²	Aug. 7, 1957
The Hon. JAMES JOSEPH McCANN...	Apr. 18, 1945	The Hon. JAY WALDO MONTETH ² ...	Aug. 22, 1957
The Hon. DAVID LAURENCE MACLAREN	Apr. 18, 1945	The Hon. FRANCIS ALVIN GEORGE	
The Hon. THOMAS VIEL.....	July 19, 1945	HAMILTON ²	Aug. 22, 1957
The Hon. WISART McLEA ROBERTSON...	Sept. 4, 1945	The Hon. SIDNEY EARLE SMITH ² ...	Sept. 13, 1957
The Hon. MILTON FOWLER GREGG...	Sept. 2, 1947	The Hon. JOHN THOMAS HAIG.....	Oct. 9, 1957
The Hon. ROBERT WELLINGTON MAY-		H.R.H. THE PRINCE PHILIP, Duke of	
HEW.....	June 11, 1948	Edinburgh.....	Oct. 14, 1957

¹ Members of Her Majesty's Privy Council for Canada take rank *inter se* according to the dates of their being sworn in.

² Ranks as a Member of the Cabinet.

³ Ranks as the Prime Minister of Canada.

6.—Duration and Sessions of Parliaments 1936-57

NOTE.—Similar information for the 1st to the 12th Parliaments, covering the period from Confederation to 1917 is given in the 1940 Year Book, p. 46, and that for the 13th to 17th Parliaments in the 1945 edition, p. 53.

Order of Parliament	Session	Date of Opening	Date of Prorogation	Days of Session	Sitting Days of House of Commons	Date of Election, Writs Returnable, Dissolution, and Length of Parliament ^{1,2}
18th Parliament.....	1st	Feb. 6, 1936	June 23, 1936	139	91	Oct. 14, 1935 ³ Nov. 9, 1935 ⁴ Jan. 25, 1940 ⁵ 4 y., 2 m., 16 d.
	2nd	Jan. 14, 1937	Apr. 10, 1937	87	62	
	3rd	Jan. 27, 1938	July 1, 1938	156	102	
	4th	Jan. 12, 1939	June 3, 1939	143	103	
	5th	Sept. 7, 1939	Sept. 13, 1939	7	6	
	6th	Jan. 25, 1940	Jan. 25, 1940	1	1	
19th Parliament.....	1st	May 16, 1940	Nov. 5, 1940	174	61	Mar. 26, 1940 ³ Apr. 17, 1940 ⁴ Apr. 16, 1945 ⁵ 5 y.
	2nd	Nov. 7, 1940	Jan. 21, 1942	441	105	
	3rd	Jan. 22, 1942	Jan. 27, 1943	371	124	
	4th	Jan. 28, 1943	Jan. 26, 1944	364	120	
	5th	Jan. 27, 1944	Jan. 31, 1945	371	136	
	6th	Mar. 19, 1945	Apr. 16, 1945	29	19	
20th Parliament.....	1st	Sept. 6, 1945	Dec. 18, 1945	104	76	June 11, 1945 ³ Aug. 9, 1945 ⁴ Apr. 30, 1949 ⁵ 3 y., 8 m., 22 d.
	2nd	Mar. 14, 1946	Aug. 31, 1946	171	118	
	3rd	Jan. 30, 1947	July 17, 1947	169	115	
	4th	Dec. 5, 1947	June 30, 1948	209	119	
	5th	Jan. 26, 1949	Apr. 30, 1949	95	59	
21st Parliament.....	1st	Sept. 15, 1949	Dec. 10, 1949	87	64	June 27, 1949 ³ Aug. 25, 1949 ⁴ June 13, 1953 ⁵ 3 y., 9 m., 20 d.
	2nd	Feb. 16, 1950	June 30, 1950	135	90	
	3rd	Aug. 29, 1950	Jan. 29, 1951	154	17	
	4th	Jan. 30, 1951	Oct. 9, 1951	253	105	
	5th	Oct. 9, 1951	Dec. 29, 1951	82	56	
	6th	Feb. 28, 1952	Nov. 20, 1952	267	87	
	7th	Nov. 20, 1952	May 14, 1953	176	108	
22nd Parliament.....	1st	Nov. 12, 1953	June 26, 1954	227	139	Aug. 10, 1953 ³ Oct. 8, 1953 ⁴ Apr. 12, 1957 3 y., 6 m., 5 d.
	2nd	Jan. 7, 1955	July 28, 1955	203	140	
	3rd	Jan. 10, 1956	Aug. 14, 1956	218	152	
	4th	Nov. 26, 1956	Jan. 8, 1957	44 ⁷	5	
	5th	Jan. 8, 1957	Apr. 12, 1957	95	71	
23rd Parliament.....	1st	Oct. 14, 1957	June 10, 1957 ³ Aug. 8, 1957

¹ The ordinary legal limit of duration for each Parliament is five years. ² Duration of Parliament in years, months and days. The life of a Parliament is counted from the date of return of election writs to the date of dissolution, both days inclusive (B.N.A. Act, Sect. 50).

³ Date of general election. ⁴ Writs returnable.

⁵ Dissolution of Parliament. ⁶ During the war years Parliament was kept in almost continuous session. When prorogation took place it was followed immediately by a new session. During long adjournments provision was made whereby the Speaker could reconvene Parliament before the date previously set for reassembly.

⁷ Includes long adjournment from Nov. 29, 1956 to Jan. 8, 1957.

Subsection 2.—The Legislature

The federal legislative authority is vested in the Parliament of Canada consisting of the Queen, an Upper House styled the Senate, and the House of Commons. Bills may originate in either the Senate or the House subject to the provisions of Sect. 53 of the British North America Act, 1867, which provides that Bills for the appropriation of any part of the public revenue or the imposition of any tax or impost shall originate in the House of Commons. Bills must pass both Houses and receive Royal Assent before becoming law. In practice most Public Bills originate in the House of Commons although there has been a marked increase recently in the introduction of Public Bills in the Senate. Private Bills usually originate in the Senate. (*See* Chap. XXIX for current legislation.)

Under Sect. 91 of the British North America Acts, 1867-1952, the legislative authority of the Parliament of Canada extends to the following matters: the amendment of the Constitution of Canada (subject to certain exceptions); the public debt and property; the regulation of trade and commerce; unemployment insurance; the raising of money by any mode or system of taxation; the borrowing of money on the public credit; postal service; the Census and statistics; militia, military and naval service, and defence; the fixing of and providing for the salaries and allowances of civil and other officers of the Government of Canada; beacons, buoys, lighthouses and Sable Island; navigation and shipping; quarantine and the establishment and maintenance of marine hospitals; sea coast and inland fisheries; ferries between a province and any British or foreign country or between two provinces; currency and coinage, banking, incorporation of banks and the issue of paper money; savings banks, weights and measures; bills of exchange and promissory notes; interest; legal tender; bankruptcy and insolvency; patents of invention and discovery; copyrights; Indians and lands reserved for the Indians; naturalization and aliens; marriage and divorce; the criminal law, except the constitution of courts of criminal jurisdiction, but including the procedure in criminal matters; the establishment, maintenance and management of penitentiaries; such classes of subjects as are expressly excepted in the enumeration of the classes of subjects by these Acts assigned exclusively to the legislatures of the provinces.

Under Sect. 95 the Parliament of Canada may make laws in relation to agriculture and immigration concurrently with provincial legislatures although federal legislation is paramount in the event of conflict. By the British North America Act, 1951 (14-15 Geo. VI, c. 32) it was declared that the Parliament of Canada might make laws in relation to old age pensions in Canada but no such law shall affect the operation of any provincial laws in relation to old age pensions.

The Senate.—From an original membership of 72 at Confederation the Senate, through the addition of new provinces and the general growth of population, now has 102 members, the latest change in representation having been made on the admission of Newfoundland to Confederation in 1949. The growth of representation in the Senate is traced in the 1940 Year Book, pp. 47-49, and is summarized by provinces in Table 7.

7.—Representation in the Senate since Confederation, 1867

Province	1867	1870	1871	1873	1882	1887	1892	1903	1905	1915-1948	1949-1957
Ontario.....	24	24	24	24	24	24	24	24	24	24	24
Quebec.....	24	24	24	24	24	24	24	24	24	24	24
Atlantic Provinces.....	24	24	24	24	24	24	24	24	24	24	30
Nova Scotia.....	12	12	12	10	10	10	10	10	10	10	10
New Brunswick.....	12	12	12	10	10	10	10	10	10	10	10
Prince Edward Island.....	...	...	...	4	4	4	4	4	4	4	4
Newfoundland.....	...	...	...	...	...	...	...	...	...	...	6
Western Provinces.....	...	2	5	5	6	8	9	11	15	24	24
Manitoba.....	...	2	2	2	3	3	4	4	4	6	6
British Columbia.....	...	...	3	3	3	3	3	3	3	6	6
Saskatchewan.....	...	...	...	...	...	2	2	4	4	6	6
Alberta.....	...	...	...	...	...	...	...	4	4	6	6
Totals.....	72	74	77	77	78	80	81	83	87	96	102

8.—Members of the Senate by Province as at Oct. 15, 1957

Speaker.....	The Hon. MARK-ROBERT DROUIN
Leader of the Government.....	The Hon. JOHN THOMAS HAIG
Leader of the Opposition.....	The Hon. WILLIAM ROSS MACDONALD
Clerk of the Senate and Clerk of the Parliaments.	JOHN FORBES MACNEILL

Ranked according to seniority, by province. All Senators are entitled to the designation "The Honourable".

Province and Name of Senator	P.O. Address	Province and Name of Senator	P.O. Address
Newfoundland— (5 Senators—1 vacancy)		Ontario— (24 Senators)	
BAIRD, ALEXANDER BOYD.....	St. John's	HARDY, ARTHUR CHARLES.....	Brockville
PETTEN, RAY.....	St. John's	MCGUIRE, WILLIAM HENRY.....	Toronto
PRATT, CALBERT C.....	St. John's	WILSON, CAIRINE REAY.....	Ottawa
BASHA, MICHAEL G.....	Curling	LAMBERT, NORMAN PLATT.....	Ottawa
BRADLEY, FREDERICK G.....	Bonavista	HAYDEN, SALTER ADRIAN.....	Toronto
Prince Edward Island— (3 Senators—1 vacancy)		PATERSON, NORMAN MCLEOD.....	Fort William
GRANT, THOMAS VINCENT.....	Montague	EULER, WILLIAM DAUM.....	Kitchener
BARBOUR, GEORGE H.....	Charlottetown	DAVIES, WILLIAM RUPERT.....	Toronto
INMAN, F. ELSIE.....	Montague	CAMPBELL, GORDON PETER.....	Toronto
Nova Scotia— (9 Senators—1 vacancy)		TAYLOR, WILLIAM HORACE.....	Brantford
QUINN, FELIX PATRICK.....	Bedford	BISHOP, CHARLES LAWRENCE.....	Ottawa
ROBERTSON, WISHART MCLEA.....	Truro	ROEBUCK, ARTHUR WENTWORTH.....	Toronto
KINLEY, JOHN JAMES.....	Lunenburg	FARQUHAR, THOMAS.....	Little Current
MC DONALD, JOHN ALEXANDER.....	Halifax	FRASER, WILLIAM ALEXANDER.....	Trenton
COMEAU, JOSEPH WILLIE.....	Comeauville	GOLDING, WILLIAM HENRY.....	Seaforth
ISNOR, GORDON B.....	Halifax	WOODROW, ALLAN L.....	Toronto
HAWKINS, CHARLES G.....	Milford Station	MACDONALD, WILLIAM ROSS.....	Brantford
SMITH, DONALD.....	Liverpool	BRADETTE, JOSEPH ARTHUR.....	Cochrane
CONNOLLY, HAROLD.....	Halifax	CONNOLLY, JOHN J.....	Ottawa
New Brunswick— (9 Senators—1 vacancy)		CROLL, DAVID.....	Toronto
VENIOT, CLARENCE JOSEPH.....	Bathurst	LEONARD, T. D'ARCY.....	Toronto
MCLEAN, ALEXANDER NEIL.....	Saint John	WHITE, GEORGE STANLEY.....	Madoc
BURCHILL, GEORGE PERCIVAL.....	South Nelson	BRUNT, WILLIAM R.....	Toronto
FERGUSON, MURIEL MCQUEEN.....	Fredericton	SULLIVAN, JOSEPH A.....	Toronto
LEGER, AUREL D.....	Grand Digue	Manitoba— (5 Senators—1 vacancy)	
MCGRAND, FRED A.....	Fredericton	(5 Senators—1 vacancy)	
SAVOIE, CALYSTE F.....	Moncton	HAIG, JOHN THOMAS.....	Winnipeg
TAYLOR, AUSTIN CLAUDE.....	Salisbury	BAUBIEN, ARTHUR LUCIEN.....	St. Jean Baptiste
EMERSON, CLARENCE V.....	Saint John	CRERAR, THOMAS ALEXANDER.....	Winnipeg
Quebec— (22 Senators—2 vacancies)		HOWDEN, JOHN POWER.....	Norwood Grove
RAYMOND, DONAT.....	Montreal	WALL, WILLIAM M.....	Winnipeg
HUGGESS, ADRIAN KNATHBULL.....	Montreal	Saskatchewan— (6 Senators)	
HOWARD, CHARLES BENJAMIN.....	Sherbrooke	MARCOTTE, ARTHUR.....	Ponteix
GOUIN, LÉON MERCIER.....	Montreal	HORNER, RALPH BYRON.....	Blaine Lake
VIEU, THOMAS.....	Outremont	ASELTINE, WALTER MORLEY.....	Rosetown
BOUCHARD, TÉLÉSPHORE DAMIEN.....	St. Hyacinthe	WOOD, THOMAS H.....	Regina
VAILLANCOURT, CYRILLE.....	Lévis	BOUCHER, WILLIAM R.....	Prince Albert
NICOL, JACOB.....	Sherbrooke	PEARSON, ARTHUR M.....	Lumsden
DUPUIS, VINCENT.....	Longueuil	Alberta— (5 Senators—1 vacancy)	
DESSUREAULT, JEAN MARIE.....	Quebec	(5 Senators—1 vacancy)	
BOUFFARD, PAUL HENRI.....	Quebec	BLAIS, ARISTIDE.....	Edmonton
JODOIN, MARIANA BEAUCHAMP.....	Montreal	GERSHAW, FRED WILLIAM.....	Medicine Hat
TREMBLAY, LEONARD D. S.....	St. Malachi	MAC KINNON, JAMES ANGUS.....	Edmonton
FOURNIER, SARTO.....	Montreal	STAMBAUGH, J. WESLEY.....	Bruce
MOLSON, H. de M.....	Montreal	CAMERON, DONALD.....	Edmonton
POWER, C. G.....	Quebec	British Columbia— (6 Senators)	
POULIOT, JEAN FRANÇOIS.....	Rivière-du-Loup	(6 Senators)	
BOIS, HENRI CHARLES.....	St. Bruno, Chambly Co.	FARRIS, JOHN WALLACE DE BEQUE.....	Vancouver
LE FRANCOIS, J. EUGENE.....	Montreal	TURCEON, JAMES GRAY.....	Vancouver
DROUIN, MARK-ROBERT.....	Quebec	MC KEEN, STANLEY STEWART.....	Vancouver
METHOT, LEON.....	Three Rivers	REID, THOMAS.....	New Westminster
MONETTE, GUSTAVE.....	Montreal	HODGES, NANCY.....	Victoria
		SMITH, SIDNEY JOHN.....	Kamloops

The House of Commons.—The British North America Act, 1867, provided that in respect of representation in the House of Commons the Province of Quebec should have the fixed number of sixty-five members and that there should be assigned to each of the other provinces such a number of members as would bear the same proportion to the number of its population as the number sixty-five bears to the number of the population of Quebec. This Act also provided that on the completion of a census in 1871 and of each subsequent decennial census the representation of the several provinces should be readjusted from time to time provided the proportionate representation of the provinces as prescribed by the Act was not thereby disturbed.

In the session of 1946 the House of Commons adopted a resolution stating that the effect of the provisions of the British North America Act relating to representation had not been satisfactory in that proportionate representation of the provinces according to population had not been maintained and that a more equitable apportionment of members to the various provinces could be effected if readjustments were made on the basis of the population of all the provinces taken as a whole. The Act was amended accordingly in 1946 to provide a new rule to regulate representation in the House of Commons. Generally speaking, representation was fixed as follows:—

The membership assigned to each province shall be computed by dividing the total population of the provinces by two hundred and fifty-four and by dividing the population of each province by the quotient so obtained.

This rule, employed in the redistribution of representation made in 1947, was effective in the general election of 1949.

After the completion of the 1951 Census it was apparent that as a result of a wartime shift of population a substantial reduction in the representation of the Province of Saskatchewan would ensue under the rules then regulating representation. Accordingly in an effort to eliminate sharp reductions in provincial representation from one census to another the British North America Act was again amended to provide representation on the following basis:—

“Sect. 51.—(1) Subject as hereinafter provided, the number of members of the House of Commons shall be two hundred and sixty-three and the representation of the provinces therein shall forthwith upon the coming into force of this section and thereafter on the completion of each decennial census be readjusted by such authority, in such manner, and from such time as the Parliament of Canada from time to time provides, subject and according to the following rules:—

“1. There shall be assigned to each of the provinces a number of members computed by dividing the total population of the provinces by two hundred and sixty-one and by dividing the population of each province by the quotient so obtained, disregarding, except as hereinafter in this section provided, the remainder, if any, after the said process of division.

“2. If the total number of members assigned to all the provinces pursuant to rule one is less than two hundred and sixty-one, additional members shall be assigned to the provinces (one to a province) having remainders in the computation under rule one commencing with the province having the largest remainder and continuing with the other provinces in the order of the magnitude of their respective remainders until the total number of members assigned is two hundred and sixty-one.

“3. Notwithstanding anything in this section, if upon completion of a computation under rules one and two, the number of members to be assigned to a province is less than the number of senators representing the said province, rules one and two shall cease to apply in respect of the said province, and there shall be assigned to the said province a number of members equal to the said number of senators.

“4. In the event that rules one and two cease to apply in respect of a province then, for the purpose of computing the number of members to be assigned to the provinces in respect of which rules one and two continue to apply, the total population of the provinces shall be reduced by the number of the population of the province in respect of which rules one and two have ceased to apply and the number two hundred and sixty-one shall be reduced by the number of members assigned to such province pursuant to rule three.

"5. On any such readjustment the number of members for any province shall not be reduced by more than fifteen per cent below the representation to which such province was entitled under rules one to four of this subsection at the last preceding readjustment of the representation of that province, and there shall be no reduction in the representation of any province as a result of which that province would have a smaller number of members than any other province that according to the results of the then last decennial census did not have a larger population; but for the purposes of any subsequent readjustment of representation under this section any increase in the number of members of the House of Commons resulting from the application of this rule shall not be included in the divisor mentioned in rules one to four of this subsection.

"6. Such readjustment shall not take effect until the termination of the then existing Parliament.

"(2) The Yukon Territory as constituted by chapter forty-one of the Statutes of Canada, 1901, shall be entitled to one member, and such other part of Canada not comprised within a province as may from time to time be defined by the Parliament of Canada shall be entitled to one member." (R.S.C. 1952, c. 304.)

The principal effect of these new rules is that the representation of any province shall not be reduced by more than 15 p.c. at any one readjustment subject however to the qualification that the rule shall not work out in such manner that the representation of a province with a smaller population shall be greater than any province with a larger population.

Subsequently Parliament enacted a measure, "An Act to readjust the Representation in the House of Commons, 1952", effective in the general election of 1953, which provided that representation in the House of Commons shall be on the following basis:—

"Sect. 2.—Eighty-five members of the House of Commons shall be elected for the Province of Ontario, seventy-five for the Province of Quebec, twelve for the Province of Nova Scotia, ten for the Province of New Brunswick, fourteen for the Province of Manitoba, twenty-two for the Province of British Columbia, four for the Province of Prince Edward Island, seventeen for the Province of Saskatchewan, seventeen for the Province of Alberta, seven for the Province of Newfoundland, one for the Yukon Territory and one for Mackenzie district of the Northwest Territories, thus making a total of two hundred and sixty-five members." (R.S.C. 1952, c. 344.)

The number of representatives of each province elected at each of the 23 general elections since Confederation is given in Table 9.

9.—Representation in the House of Commons as at Federal General Elections 1867-1957

Province or Territory	1867	1872	1874 1878	1882	1887 1891	1896 1900	1904	1908 1911	1917 1921	1925 1926 1930	1935 1940 1945	1949	1953 1957
Ontario.....	82	88	88	92	92	92	86	86	82	82	82	83	85
Quebec.....	65	65	65	65	65	65	65	65	65	65	65	73	75
Nova Scotia.....	19	21	21	21	21	20	18	18	16	14	12	13	12
New Brunswick.....	15	16	16	16	16	14	13	13	11	11	10	10	10
Manitoba.....	...	4	4	5	5	7	10	10	15	17	17	16	14
British Columbia.....	...	6	6	6	6	6	7	7	13	14	16	18	22
Prince Edward Island....	...	...	6	6	6	5	4	4	4	4	4	4	4
Saskatchewan.....	...	...	...	...	4	4	10	10	16	21	21	20	17
Alberta.....	...	...	...	...				7	12	16	17	17	17
Yukon.....	}	...	...	...	...	...	1	1	1	1	1	1	1
Mackenzie River, N.W.T.		...	...	...	...	...	...	...	...	...	...		1
Newfoundland.....	...	...	...	...	...	...	...	...	...	...	...	7	7
Totals.....	181	200	206	211	215	213	214	221	235	245	245	262	265

Under their parliamentary system of representation, based on a "constitution similar in principle to that of the United Kingdom", the people of Canada elect representatives having various political party affiliation as shown in Table 10. In a general election, the Canadian electorate not only determines what political party leader shall be called on to form the Government of the day, but it also decides which of the parties is to become the Official Opposition. Her Majesty's Loyal Opposition occupies an essential place in constitutions based on the British parliamentary system, in that its function is to oppose or criticize in debate the Government in power—an essential to good government at all times. The Official Opposition is founded, like such institutions as the Cabinet and the Prime Ministership, on unwritten custom that has become firmly established. Although the position of Leader of the Opposition is not recognized in the British North America Act, it received statutory acknowledgment in the Canadian Parliament in 1905 when the Senate and House of Commons Act (4-5 Edw. VII, c. 43, sect. 2) provided an additional sessional allowance to "the member occupying the recognized position of Leader of the Opposition in the House of Commons".

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Third General Election, June 10, 1957 and Revised to Oct. 15, 1957.

Speaker	The Hon. ROLAND MICHENER
Prime Minister	The Rt. Hon. JOHN GEORGE DIEFENBAKER
Leader of the Opposition	The Rt. Hon. LOUIS S. ST. LAURENT
Clerk of the House of Commons	LÉON J. RAYMOND

Note.—The vote is summarized by provinces in Table 12, p. 57. The leaders of the political parties are indicated by asterisks (*). For Parliamentary Assistants, see p. 44. This information, except the population of constituencies, has been supplied by the Chief Electoral Officer, Ottawa. Party affiliations are unofficial. P.C.=Progressive Conservative; Lib.=Liberal; C.C.F.=Co-operative Commonwealth Federation; S.C.=Social Credit; Ind. Lib.=Independent Liberal; Ind.=Independent; Ind. P.C.=Independent Progressive Conservative; L.-Lab.=Liberal Labour.

Province and Electoral District	Popu- lation, Census 1956	Voters on List	Total Votes Polled	Votes Polled by Mem- ber	Name of Member	P.O. Address	Party Affili- ation
	No.	No.	No.	No.			
Newfoundland— (7 members)							
Bonavista-Twillingate..	48,354	23,972	10,577	9,158	Hon. J. W. PICKERSGILL.	Ottawa, Ont.....	Lib.
Burin-Burgeo.....	46,362	18,584	Acclamation		C. W. CARTER.....	St. John's.....	Lib.
Grand Falls-White Bay- Labrador.....	71,416	33,656	15,539	11,681	T. G. W. ASHBOURNE....	Twillingate.....	Lib.
Humber-St. George's..	64,683	28,318	15,499	10,272	H. M. BATTEN.....	Corner Brook.....	Lib.
St. John's East.....	66,132	32,912	19,647	10,312	J. A. McGRATH.....	St. John's.....	P.C.
St. John's West.....	62,921	32,139	19,490	10,539	Hon. W. J. BROWNE....	St. John's.....	P.C.
Trinity-Conception....	55,206	27,658	12,106	8,360	L. T. STICK.....	Bay Roberts.....	Lib.
Prince Edward Island— (4 members)							
Kings.....	17,853	10,177	8,902	4,598	J. A. MacDonald.....	Cardigan.....	P.C.
Prince.....	38,007	19,213	16,463	8,119	O. H. PHILLIPS.....	Alberton.....	P.C.
Queens.....	43,425	24,834	41,853	11,597	Hon. J. A. MacLEAN....	Beaton's Mills....	P.C.
				10,651	H. MacQUARRIE.....	Victoria.....	P.C.
Nova Scotia— (12 members)							
Antigonish.....							
Guysborough.....	26,878	14,654	11,966	6,053	A. R. MacDonald.....	Antigonish.....	P.C.
Cape Breton North and Victoria.....	46,874	23,985	19,724	9,097	R. Muir.....	Sydney Mines....	P.C.
Cape Breton South....	83,152	43,360	37,056	14,894	D. MacINNIS.....	Glace Bay.....	P.C.
Colchester-Hants.....	59,529	33,640	28,440	15,231	C. F. KENNEDY.....	Truro.....	P.C.
Cumberland.....	39,598	22,815	18,577	10,065	R. C. COATES.....	Amherst.....	P.C.
Digby-Annapolis-Kings	71,076	38,642	32,153	18,534	Hon. G. C. Nowlan....	Wolfville.....	P.C.
Halifax.....	197,943	108,433	163,067	41,141	R. McCleave.....	Birch Cove.....	P.C.
				41,099	E. Morris.....	Halifax.....	P.C.
Inverness-Richmond..	32,833	18,925	15,305	8,035	A. J. MacEachen.....	Inverness.....	Lib.
Pictou.....	44,566	25,470	22,521	12,208	R. MacEwan.....	New Glasgow....	P.C.
Queens-Lunenburg....	46,981	29,372	24,620	12,372	L. R. CROUSE.....	Lunenburg.....	P.C.
Shelburne-Yarmouth- Clare.....	45,287	25,652	20,701	10,734	T. A. M. Kirk.....	Yarmouth.....	Lib.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Third General Election, June 10, 1957 and Revised to Oct. 15, 1957—continued.

Province and Electoral District	Population, Census 1956	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
New Brunswick— (10 members)							
Charlotte.....	24,497	14,290	12,338	6,393	A. W. STUART.....	St. Andrews.....	Lib.
Cloucester.....	64,119	28,191	22,780	13,052	H. J. ROYCHAUD.....	Caracquet.....	Lib.
Kent.....	27,492	13,021	11,212	6,424	H. J. MICHAUD.....	Buctouche.....	Lib.
Northumberland-Miramichi.....	47,223	22,890	18,598	8,596	G. R. McWILLIAM.....	Newcastle.....	Lib.
Restigouche-Madawaska.....	76,708	34,790	29,217	15,776	J. C. VAN HORNE.....	Campbellton.....	P.C.
Royal.....	37,105	21,208	17,210	10,051	Hon. A. J. BROOKS.....	Sussex.....	P.C.
Saint John-Albert.....	92,335	53,747	41,647	21,983	T. M. BELL.....	Saint John.....	P.C.
Victoria-Carleton.....	42,093	21,906	17,082	9,845	G. W. MONTGOMERY.....	Woodstock.....	P.C.
Westmorland.....	85,414	47,710	39,657	19,873	H. J. MURPHY.....	Moncton.....	Lib.
York-Sunbury.....	57,630	33,283	27,260	13,356	J. C. MACRAE.....	Fredericton.....	P.C.
Quebec— (75 members)							
Argenteuil-Deux-Montagnes.....	55,069	29,676	24,356	10,084	P. VALOIS.....	Lachute.....	Lib.
Beauce.....	59,290	28,067	24,253	12,384	R. POULIN.....	St. Martin.....	Ind.
Beauharnois-Salaberry.....	53,811	30,973	21,671	14,030	R. CAUCHON.....	Salaberry-de-Valleyfield.....	Lib.
Bellechasse.....	32,546	15,925	10,998	7,960	O. LAFLAMME.....	Quebec.....	Lib.
Berthier-Maskinongé-Delanaudière.....	47,423	24,921	19,697	10,418	J. LANGLOIS.....	St. Justin.....	Lib.
Bonaventure.....	43,240	19,801	16,194	8,161	N. ARSENAULT.....	Quebec.....	P.C.
Brome-Missisquoi.....	40,563	22,246	17,996	9,274	J. L. DESLIÈRES.....	Sutton.....	Lib.
Chambly-Rouville.....	45,350	24,580	18,897	11,302	Y. L'HEUREUX.....	Beloil.....	Lib.
Champlain.....	58,321	29,949	24,035	13,677	I. ROCHEFORT.....	Cap de la Madeleine.....	Lib.
Chapleau.....	65,456	30,216	22,735	11,428	C. N. BARRÈS.....	Amos.....	Lib.
Charlevoix.....	47,430	23,013	18,506	10,182	A. MALTAIS.....	Sillery.....	Lib.
Châteauguay-Huntingdon-Laprairie.....	52,413	27,498	19,536	10,066	J. BOUCHER.....	Laprairie.....	Lib.
Chicoutimi.....	70,668	33,346	29,119	15,090	R. GAUTHIER.....	Chicoutimi.....	Lib.
Compton-Frontenac.....	44,048	20,998	18,040	9,328	J. A. BLANCHETTE.....	Chartierville.....	Lib.
Dorchester.....	38,737	18,535	15,878	8,054	J. A. LANDRY.....	Ste. Germaine.....	Lib.
Drummond-Arthabaska.....	83,407	41,231	32,480	11,462	S. BOULANGER.....	Victoriaville.....	Ind. Lib.
Gaspé.....	63,941	29,508	22,521	10,916	R. ENGLISH.....	Rivière-au-Renard.....	P.C.
Gatineau.....	48,721	24,797	18,505	10,770	R. LEDUC.....	Maniwaki.....	Lib.
Hull.....	76,231	41,083	35,292	15,551	A. CARON.....	Hull.....	Lib.
Îles-de-la-Madeleine.....	11,556	5,141	4,671	2,472	C.-A. CANNON.....	Quebec.....	Lib.
Joliette-L'Assomption-Montcalm.....	87,101	44,899	24,097	19,445	M. BRETON.....	Joliette.....	Lib.
Kamouraska.....	35,907	18,025	12,647	6,489	B. CHARTIER.....	St. Antonin.....	Ind.
Labelle.....	43,705	21,460	17,627	9,406	H. COURTEMANCHE.....	Mont Laurier.....	P.C.
Lac-Saint-Jean.....	42,918	19,474	16,671	10,129	A. GAUTHIER.....	Alma.....	Lib.
Lapointe.....	68,106	32,078	26,288	13,671	A. BRASSARD.....	Jonquière.....	Lib.
Lévis.....	44,284	24,858	20,677	14,693	M. BOURGET.....	Lévis.....	Lib.
Longueuil.....	85,540	46,376	33,347	19,314	A. VINCENT.....	St. Lambert.....	P.C.
Lotbinière.....	38,625	18,409	16,335	8,372	R. O'HURLEY.....	St. Gilles.....	Lib.
Matapédia-Matane.....	67,441	29,888	22,831	11,637	L. THIBAUT.....	Matane.....	Lib.
Mégantic.....	64,958	31,485	23,983	15,390	J. LAFONTAINE.....	Thetford Mines.....	Lib.
Montmagny-L'Islet.....	39,840	20,280	16,560	9,772	Hon. J. LESAGE.....	Quebec.....	Lib.
Nicolet-Yamaska.....	45,880	23,654	19,272	9,805	Hon. P. COMTOIS.....	St. Thomas-de-Pierreville.....	P.C.
Pontiac-Témiscamingue.....	42,432	20,485	16,658	8,642	H. PROUDFOOT.....	Fort Coulonge.....	Lib.
Portneuf.....	46,976	25,059	19,622	11,330	P. GAUTHIER.....	Deschambault.....	Lib.
Quebec East.....	87,323	51,011	38,465	27,404	Rt. Hon. L. S. ST. LAURENT*.....	Quebec.....	Lib.
Quebec South.....	54,949	36,726	28,929	17,709	F. G. POWER.....	Quebec.....	Lib.
Quebec West.....	55,413	31,848	25,219	11,828	R. BÉGIN.....	Quebec.....	Lib.
Quebec-Montmorency.....	98,331	50,642	39,584	24,964	W. LA CROIX.....	Quebec.....	Lib.
Richelieu-Verchères.....	53,068	28,748	19,904	16,003	L.-J. L. CARDIN.....	Ste. Anne-de-Sorel.....	Lib.
Richmond-Wolfe.....	57,963	29,094	22,308	10,300	E.-O. GINGRAS.....	Marbleton.....	Lib.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Third General Election, June 10, 1957 and Revised to Oct. 15, 1957—continued.

Province and Electoral District	Population, Census 1956	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
No.	No.	No.	No.	No.			
Quebec—concluded							
Rimouski.....	70,683	33,423	24,616	14,632	G. LEGARÉ.....	Rimouski.....	Lib.
Roberval.....	52,980	22,351	18,248	10,860	G. VILLENEUVE.....	Mistassini.....	Lib.
St. Hyacinthe-Bagot.....	58,517	32,270	25,876	13,865	J.-H.-T. RICARD.....	St. Hyacinthe.....	P.C.
St. Jean-Iberville.....							
Napierville.....	57,871	29,961	26,087	13,427	J.-A. MÉNARD.....	St. Jean.....	Lib.
St. Maurice-Laféche.....	79,451	43,487	31,900	18,714	J.-A. RICHARD.....	Shawinigan Falls.....	Lib.
Saguenay.....	56,655	30,695	19,911	11,407	L. BRISSON.....	Quebec.....	Lib.
Shefford.....	60,388	31,146	23,932	14,897	M. BOIVIN.....	Granby.....	Lib.
Sherbrooke.....	64,463	35,354	26,355	16,324	M. GINGUES.....	Sherbrooke.....	Lib.
Stanstead.....	41,348	22,402	17,417	9,827	L.-É. ROBERGE.....	Rock Island.....	Lib.
Témiscouata.....	58,424	26,865	19,926	11,558	J.-P. ST. LAURENT.....	Quebec.....	Lib.
Terrebonne.....	81,895	44,522	32,871	19,515	R. RAYMOND.....	St. Jérôme.....	Lib.
Three Rivers.....	62,932	35,837	29,920	15,004	Hon. L. BALCER.....	Three Rivers.....	P.C.
Vaudreuil-Soulanges.....	32,361	18,157	13,384	9,055	L.-R. BEAUDOIN.....	Hudson.....	Lib.
Villeuve.....	74,366	34,527	26,170	9,893	A. DUMAS.....	Malartic.....	Lib.
Island of Montreal and Ile Jesus—							
Cartier.....	48,952	25,665	16,719	11,955	L. D. CRESTOHL.....	Montreal.....	Lib.
Dollard.....	84,052	48,439	32,347	21,917	G. ROULEAU.....	Montreal.....	Lib.
Hochelaga.....	75,004	45,848	27,682	20,641	R. EUDES.....	Montreal.....	Lib.
Jacques Cartier.....							
Lasalle.....	110,931	66,015	49,046	23,378	R. J. PRATT.....	Dorval.....	P.C.
Lafontaine.....	50,584	33,284	21,410	15,501	J.-G. RATELLE.....	Montreal.....	Lib.
Laurier.....	47,055	29,523	19,170	11,336	Hon. L. CHEVRIER.....	Pont-Viau.....	Lib.
Laval.....	117,525	66,683	43,926	26,254	L. DEMERS.....	Montreal.....	Lib.
Maisonneuve.....							
Rosemont.....	94,124	58,345	35,981	25,041	J.-P. DESCHATELETS.....	Montreal.....	Lib.
Mercier.....	124,913	67,240	40,778	30,024	M. MONETTE.....	Pointe-aux-Trembles.....	Lib.
Mount Royal.....	106,636	62,883	39,092	23,325	A. A. MACNAUGHTON.....	Montreal.....	Lib.
Notre-Dame-de-Grâce.....	93,983	58,990	43,463	24,517	Hon. W. M. HAMILTON.....	Montreal.....	P.C.
Outremont-St. Jean.....	58,446	33,461	19,430	13,840	R. BOURQUE.....	Outremont.....	Lib.
Papineau.....	81,066	49,790	31,534	24,373	A. MEUNIER.....	Montreal.....	Lib.
St. Ann.....	40,783	22,937	16,035	7,771	G. LOISELLE.....	Montreal.....	Ind. Lib.
St. Antoine.....							
Westmount.....	61,800	40,373	26,615	14,485	Hon. G. C. MARLER.....	Ottawa, Ont.....	Lib.
St. Denis.....	65,286	39,986	25,260	17,027	A. DENIS.....	Montreal.....	Lib.
St. Henri.....	68,959	37,269	27,937	12,489	J.-A. BONNIER.....	Montreal.....	Lib.
St. Jacques.....	63,653	40,642	19,609	7,900	R. BEAUDRY.....	Montreal.....	Lib.
St. Lawrence.....							
St. George.....	44,510	27,682	15,047	7,759	C. RICHARDSON.....	Montreal.....	Lib.
St. Marie.....	60,539	35,823	20,998	12,532	H. DUPUIS.....	Montreal.....	Lib.
Verdun.....	78,262	47,100	30,490	18,695	Y. LEDUC.....	Verdun.....	Lib.
Ontario—							
(85 members)							
Algoma East.....	40,838	25,425	16,656	8,574	Hon. L. B. PEARSON.....	Ottawa.....	Lib.
Algoma West.....	63,727	32,813	23,764	10,202	G. E. NIXON.....	Sault Ste. Marie.....	Lib.
Brantford.....	51,813	30,628	24,143	9,902	J. WRATTEN.....	Brantford.....	P.C.
Brant-Haldimand.....	52,246	28,491	23,358	12,858	J. A. CHARLTON.....	Paris.....	P.C.
Bruce.....	28,658	17,051	14,420	8,225	A. E. ROBINSON.....	Kincardine.....	P.C.
Carleton.....	92,590	55,353	45,564	27,865	R. A. BELL.....	Britannia Bay.....	P.C.
Cochrane.....	42,720	20,808	15,039	6,626	J. A. A. HAREL.....	Kapuskasing.....	Lib.
Dufferin-Simcoe.....	48,859	24,375	18,337	11,852	W. E. ROWE.....	Newton Robinson.....	Lib.
Durham.....	35,827	20,584	16,674	7,331	P. VIVIAN.....	Port Hope.....	P.C.
Elgin.....	59,114	32,783	25,032	14,822	J. A. MCBAIN.....	St. Thomas.....	P.C.
Essex East.....	93,859	51,737	39,242	22,023	Hon. P. MARTIN.....	Windsor.....	Lib.
Essex South.....	51,613	27,825	21,035	10,006	R. D. THRASHER.....	Amherstburg.....	P.C.
Essex West.....	99,948	54,669	35,881	15,246	D. BROWN.....	Windsor.....	Lib.
Fort William.....	51,450	28,357	22,679	8,552	D. MCIVOR.....	Fort William.....	Lib.
Glengarry-Prescott.....	44,984	24,313	20,721	8,241	O. F. VILLENEUVE.....	Maxville.....	P.C.
Grenville-Dundas.....	37,541	22,037	14,571	8,967	A. C. CASSELMAN.....	Prescott.....	P.C.
Grey-Bruce.....	36,200	21,565	18,446	10,707	E. A. WINKLER.....	Hanover.....	P.C.
Grey North.....	38,183	23,125	19,411	11,028	P. V. NOBLE.....	Shallow Lake.....	P.C.
Halton.....	68,297	40,095	30,730	17,795	A. BEST.....	Georgetown.....	P.C.
Hamilton East.....	67,147	39,581	27,967	10,528	Q. MARTIN.....	Hamilton.....	P.C.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Third General Election, June 10, 1957 and Revised to Oct. 15, 1957—continued.

Province and Electoral District	Population, Census 1956	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
No.	No.	No.	No.				
Ontario—concluded							
Hamilton South.....	97,438	56,962	41,432	16,085	R. M. T. McDONALD.....	Hamilton.....	P.C.
Hamilton West.....	72,232	42,946	31,292	16,533	Hon. ELLEN L. FAIR- CLOUGH.....	Hamilton.....	P.C.
Hastings-Frontenac.....	46,950	26,987	18,873	11,602	G. S. WHITE ¹	Madoc.....	P.C.
Hastings South.....	62,804	35,653	28,446	14,798	L. GRILLS.....	Belleville.....	P.C.
Huron.....	46,426	25,119	21,385	12,323	E. CARDIFF.....	Brussels.....	P.C.
Kenora-Rainy River.....	67,356	31,915	22,669	10,701	W. M. BENEDICKSON.....	Kenora.....	L.-Lab.
Kent.....	68,212	37,862	27,065	13,977	B. HUFFMAN.....	Blenheim.....	Lib.
Kingston.....	65,680	38,246	29,082	14,739	W. J. HENDERSON.....	Kingston.....	Lib.
Lambton-Kent.....	41,220	23,500	17,628	9,745	E. J. CAMPBELL.....	Wallaceburg.....	P.C.
Lambton West.....	67,350	36,680	27,655	13,096	J. W. MURPHY.....	Camlachie.....	P.C.
Lanark.....	37,903	22,038	16,285	11,629	W. G. BLAIR ²	Perth.....	P.C.
Leeds.....	43,199	25,491	21,827	11,034	H. STANTON.....	Seeley's Bay.....	P.C.
Lincoln.....	111,740	63,057	49,009	25,420	J. SMITH.....	St. Catharines.....	P.C.
London.....	74,865	46,290	34,062	19,804	G. E. HALPENNY.....	London.....	P.C.
Middlesex East.....	78,524	43,064	33,336	20,287	H. O. WHITE.....	Glanworth.....	P.C.
Middlesex West.....	37,508	21,329	17,252	9,075	W. H. A. THOMAS.....	Strathroy.....	P.C.
Niagara Falls.....	70,950	39,661	23,688	12,594	W. L. HOUCK.....	Niagara Falls.....	Lib.
Nickel Belt.....	60,098	27,550	20,878	8,819	J. L. GAUTHIER.....	Sudbury.....	Lib.
Nipissing.....	58,258	29,890	22,106	12,528	J. R. GARLAND.....	North Bay.....	Lib.
Norfolk.....	46,122	24,875	19,526	10,885	J. E. KNOWLES.....	Langton.....	P.C.
Northumberland.....	38,205	22,280	19,372	10,062	B. THOMPSON.....	Brighton.....	P.C.
Ontario.....	99,039	56,133	43,666	18,468	Hon. M. STARR.....	Oshawa.....	P.C.
Ottawa East.....	52,473	33,219	25,943	18,216	J. T. RICHARD.....	Ottawa.....	Lib.
Ottawa West.....	68,255	44,344	34,472	19,434	G. McILRAITH.....	Ottawa.....	Lib.
Oxford.....	65,228	36,675	30,049	20,404	W. NESBITT.....	Woodstock.....	P.C.
Parry Sound-Muskoka.....	52,556	30,745	24,392	14,014	G. H. AIKEN.....	Gravenhurst.....	P.C.
Peel.....	83,108	47,755	35,286	19,818	J. PALLET.....	Port Credit.....	P.C.
Perth.....	53,410	32,284	26,044	16,663	Hon. J. W. MONTEITH.....	Stratford.....	P.C.
Peterborough.....	59,729	35,418	27,595	16,598	G. K. FRASER.....	Lakefield.....	P.C.
Port Arthur.....	78,111	38,829	28,675	12,228	D. M. FISHER.....	Port Arthur.....	C.C.F.
Prince Edward-Lennox.....	35,666	20,155	15,627	9,003	C. A. MILLIGAN.....	Napanee.....	P.C.
Renfrew North.....	45,802	23,530	19,530	10,227	J. M. FORGIE.....	Pembroke.....	Lib.
Renfrew South.....	34,403	19,035	16,663	8,782	W. BASKIN.....	Renfrew.....	P.C.
Russell.....	88,306	47,050	36,198	20,673	J. O. GOUR.....	Casselman.....	Lib.
Simcoe East.....	54,006	28,574	23,069	12,497	P. B. RYNDAR.....	Orillia.....	P.C.
Simcoe North.....	40,754	24,428	18,507	11,437	H. SMITH.....	Barrie.....	P.C.
Stormont.....	56,452	31,163	23,676	12,505	A. P. LAVIGNE.....	Cornwall.....	Lib.
Sudbury.....	67,868	36,355	26,190	11,927	R. MITCHELL.....	Sudbury.....	Lib.
Timiskaming.....	49,891	24,980	19,680	6,936	A. PETERS.....	New Liskeard.....	C.C.F.
Timmins.....	45,469	22,567	17,688	6,776	M. MARTIN.....	Timmins.....	C.C.F.
Victoria.....	45,661	28,064	22,016	14,153	C. W. HODGSON.....	Hali Burton.....	P.C.
Waterloo North.....	95,256	55,707	38,032	15,972	N. C. SCHNEIDER.....	Preston.....	Lib.
Waterloo South.....	53,518	31,536	24,982	11,699	W. ANDERSON.....	Galt.....	P.C.
Welland.....	78,566	43,447	31,612	13,241	W. H. McMILLAN.....	Thorold.....	Lib.
Wellington-Huron.....	31,712	18,375	15,297	9,421	M. HOWE.....	Arthur.....	P.C.
Wellington South ³	50,928	29,591	21,496	11,632	A. D. HALES.....	Guelph.....	P.C.
Wentworth.....	79,421	45,560	33,252	19,037	F. E. LENNARD.....	Dundas.....	P.C.
York Centre.....	127,591	74,980	50,007	23,295	F. C. STINSON.....	Willowdale.....	P.C.
York East.....	73,284	48,216	34,073	17,236	R. H. McGREGOR.....	Toronto.....	P.C.
York-Humber.....	78,202	49,860	36,007	18,449	MARGARET ATKIN.....	Toronto.....	P.C.
York North.....	70,595	42,662	30,594	17,770	C. A. CATHERS.....	Newmarket.....	P.C.
York-Scarborough.....	167,310	104,302	76,166	42,299	F. C. McGEE.....	Dow Mills.....	P.C.
York South.....	105,979	64,875	42,742	16,624	W. G. BEECH.....	Toronto.....	P.C.
York West.....	110,050	67,532	49,302	27,035	J. B. HAMILTON.....	Etobicoke.....	P.C.
City of Toronto—							
Broadview.....	57,494	34,760	21,805	12,815	Hon. G. HEES.....	Toronto.....	P.C.
Danforth.....	84,617	53,575	37,230	18,604	R. H. SMALL.....	Toronto.....	P.C.
Davenport.....	62,430	32,553	22,574	8,989	M. D. MORTON.....	Toronto.....	P.C.
Eglinton.....	71,271	51,048	36,875	25,046	Hon. D. M. FLEMING.....	Toronto.....	P.C.
Greenwood.....	56,637	35,331	23,572	12,422	Hon. J. M. MACDONNELL.....	Toronto.....	P.C.
High Park.....	59,850	34,853	24,353	11,034	J. W. KUCHERA.....	Toronto.....	P.C.
Parkdale.....	56,650	32,868	22,212	9,882	A. MALONEY.....	Toronto.....	P.C.
Rosedale.....	55,088	33,733	23,228	12,415	D. J. WALKER.....	Toronto.....	P.C.
St. Paul's.....	54,262	37,450	23,656	13,243	Hon. R. MICHENER.....	Toronto.....	P.C.
Spadina.....	85,490	41,134	24,720	10,348	C. E. REA.....	Toronto.....	P.C.
Trinity.....	63,801	32,162	19,742	7,068	S. HADIASZ.....	Toronto.....	Lib.

¹ Resigned Sept. 20, 1957.
July 15, 1957.

² Died June 16, 1957; see Table 11 for by-election.

³ Delayed election.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Third General Election, June 10, 1957 and Revised to Oct. 15, 1957—continued.

Province and Electoral District	Population, Census 1956	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
No.	No.	No.	No.				
Manitoba—							
(14 members)							
Brandon-Souris.....	62,365	36,430	28,308	17,389	W. G. DINSDALE.....	Brandon.....	P.C.
Churchill.....	48,999	21,851	16,114	6,191	R. SIMPSON.....	Flin Flon.....	P.C.
Dauphin.....	41,304	22,320	16,967	6,706	F. S. ZAPLITNY.....	Dauphin.....	C.C.F.
Lisgar.....	46,756	25,260	19,114	8,708	G. MUIR.....	Roland.....	P.C.
Marquette.....	49,190	26,447	22,260	9,695	N. MANDZIUK.....	Oakburn.....	P.C.
Portage-Neepawa.....	55,875	28,152	21,646	9,248	G. C. FAIRFIELD.....	Portage la Prairie.....	P.C.
Provencher.....	40,658	19,795	13,590	4,739	W. H. JORGENSEN.....	Ste. Elizabeth.....	P.C.
St. Boniface.....	59,422	33,235	25,215	7,777	L. DENISET.....	St. Boniface.....	Lib.
Selkirk.....	49,047	23,999	16,973	7,432	W. S. BRYCE.....	Selkirk.....	C.C.F.
Springfield.....	41,814	21,322	15,825	5,951	J. SCHULZ.....	Winnipeg.....	C.C.F.
Winnipeg North.....	97,945	58,129	42,562	20,354	A. STEWART.....	Winnipeg.....	C.C.F.
Winnipeg North Centre.....	77,917	44,155	28,348	15,229	S. H. KNOWLES.....	Winnipeg.....	C.C.F.
Winnipeg South.....	98,248	60,165	46,529	23,855	G. CHOWN.....	Winnipeg.....	P.C.
Winnipeg South Centre.....	80,500	52,542	38,376	19,022	Hon. G. CHURCHILL.....	Winnipeg.....	P.C.
Saskatchewan—							
(17 members)							
Assiniboia.....	46,444	25,728	22,181	10,389	H. R. ARGUE.....	Kayville.....	C.C.F.
Humboldt-Melfort.....	49,221	25,774	20,614	7,336	H. A. BRYSON.....	Tisdale.....	C.C.F.
Kindersley.....	47,724	26,288	22,602	8,605	M. JOHNSON.....	Beadle.....	C.C.F.
Mackenzie.....	45,971	22,971	17,937	7,295	A. M. NICHOLSON.....	Sturgis.....	C.C.F.
Meadow Lake.....	37,840	17,378	12,831	4,140	J. H. HARRISON.....	Medstead.....	Lib.
Melville.....	42,219	22,844	19,653	7,949	Rt. Hon. J. G. GARDINER.....	Lemberg.....	Lib.
Moose Jaw-Lake Centre.....	64,947	36,183	29,077	9,834	L. H. LEWRY.....	Moose Jaw.....	C.C.F.
Moose Mountain.....	42,897	24,755	20,023	6,770	E. McCULLOUGH.....	Manor.....	C.C.F.
Prince Albert.....	56,121	28,537	23,396	12,349	Rt. Hon. J. G. DIFEN- BAKER.....	Prince Albert.....	P.C.
Qu'Appelle.....	39,894	21,283	18,266	6,217	Hon. A. HAMILTON.....	Saskatoon.....	P.C.
Regina City.....	81,235	50,319	41,066	14,561	A. C. ELLIS.....	Regina.....	C.C.F.
Rosetown-Biggar.....	45,303	26,099	21,843	9,846	M. J. COLDWELL.....	Ottawa, Ont.....	C.C.F.
Rosthern.....	48,815	24,490	18,929	6,828	W. A. TUCKER.....	Rosthern.....	Lib.
Saskatoon.....	73,154	45,818	33,927	12,905	H. F. JONES.....	Saskatoon.....	P.C.
Swift Current-Maple Creek.....	55,313	31,682	26,021	9,637	I. W. STUDER.....	Lac Pelletier.....	Lib.
The Battlefords.....	52,300	26,589	21,360	8,320	M. CAMPBELL.....	Neilburg.....	C.C.F.
Yorkton.....	51,267	28,080	22,540	9,712	G. H. CASTLEDEN.....	Yorkton.....	C.C.F.
Alberta—							
(17 members)							
Acadia.....	46,105	25,313	19,628	10,348	V. QUELCH.....	Ottawa, Ont.....	S.C.
Athabasca.....	56,611	25,535	18,095	7,453	J. M. DUCHÈNE.....	Bonneyville.....	Lib.
Battle River-Camrose.....	57,576	30,040	22,580	10,945	J. A. SMITH.....	Vermilion.....	S.C.
Bow River.....	47,454	24,712	19,034	7,383	C. E. JOHNSTON.....	Calgary.....	S.C.
Calgary North.....	98,777	56,884	40,295	21,783	Hon. D. S. HARKNESS.....	Calgary.....	P.C.
Calgary South.....	95,245	55,852	39,939	21,065	A. SMITH.....	Calgary.....	P.C.
Edmonton East.....	70,755	39,296	27,670	10,967	A. A. HOLOWACH.....	Edmonton.....	S.C.
Edmonton-Stratcona.....	91,293	50,165	37,092	13,124	S. H. S. THOMPSON.....	Edmonton.....	S.C.
Edmonton West.....	106,778	58,878	41,165	14,173	M. LAMBERT.....	Edmonton.....	P.C.
Jasper-Edson.....	62,652	31,684	21,994	8,795	C. YULL.....	Barhead.....	S.C.
Lethbridge.....	62,332	27,952	20,749	10,910	J. H. BLACKMORE.....	Cardston.....	S.C.
Macleod.....	50,177	25,061	19,415	8,411	E. G. HANSELL.....	Vulcan.....	S.C.
Medicine Hat.....	56,918	29,510	23,551	10,960	H. A. OLSON.....	Idesleigh.....	S.C.
Peace River.....	69,725	33,696	23,971	10,386	S. E. Low.....	Ottawa, Ont.....	S.C.
Red Deer.....	52,075	27,605	20,143	9,519	F. D. SHAW.....	Innisfail.....	S.C.
Vegeville.....	45,322	23,603	18,318	7,327	P. STEFURA.....	Chipman.....	S.C.
Wetaskiwin.....	53,321	25,257	17,545	7,968	R. THOMAS.....	Wetaskiwin.....	S.C.
British Columbia—							
(22 members)							
Burnaby-Coquitlam.....	67,202	37,353	28,460	10,947	E. REGIER.....	East Burnaby.....	C.C.F.
Burnaby-Richmond.....	73,030	42,560	30,983	7,999	T. J. IRWIN.....	White Rock.....	S.C.
Cariboo.....	60,464	28,694	19,627	8,292	B. R. LEWIS.....	Prince George.....	S.C.
Coast-Capilano.....	91,051	54,575	42,414	16,443	J. SINCLAIR.....	North Vancouver.....	Lib.
Comox-Alberni.....	65,414	34,623	24,160	8,598	T. S. BARNETT.....	Alberni.....	C.C.F.
Esquimalt-Saanich.....	59,812	35,934	28,768	15,434	Hon. G. R. PEARKES.....	Victoria.....	P.C.
Fraser Valley.....	75,518	39,071	28,891	11,091	A. B. PATTERSON.....	Abbotsford.....	S.C.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Third General Election, June 10, 1957 and Revised to Oct. 15, 1957—concluded.

Province and Electoral District	Population, Census 1956	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
British Columbia—concl.							
Kamloops	59,139	29,225	21,381	10,029	Hon. E. D. FULTON.....	Kamloops.....	P.C.
Kootenay East.....	36,845	19,035	14,951	4,670	J. BYRNE.....	Kimberley.....	Lib.
Kootenay West.....	53,633	27,474	20,647	8,996	H. W. HERRIDGE.....	Nakusp.....	C.C.F.
Nanaimo.....	52,805	30,625	23,415	8,770	C. CAMERON.....	Lantzville.....	C.C.F.
New Westminster.....	104,632	62,634	48,077	16,916	G. HAHN.....	North Surrey.....	S.C.
Okanagan Boundary ..	58,903	32,094	24,622	7,465	F. C. CHRISTIAN.....	Penticton.....	S.C.
Okanagan-Revelstoke..	32,744	17,044	13,615	5,376	G. W. McLEOD.....	Enderby.....	S.C.
Skeena.....	56,664	21,206	14,206	5,517	F. HOWARD.....	Terrace.....	C.C.F.
Vancouver-Burrard.....	59,862	41,708	29,704	13,691	J. TAYLOR.....	Vancouver.....	P.C.
Vancouver Centre.....	43,346	33,906	22,162	9,087	D. JUNG.....	Vancouver.....	P.C.
Vancouver East.....	57,302	33,727	22,919	10,782	H. E. WINCH.....	Vancouver.....	C.C.F.
Vancouver-Kingsway....	61,720	37,483	26,620	9,040	A. MACDONALD.....	Vancouver.....	C.C.F.
Vancouver Quadra.....	69,103	44,246	34,258	21,719	Hon. H. C. GREEN.....	Vancouver.....	P.C.
Vancouver South.....	77,716	47,399	36,108	16,058	E. J. BROOME.....	Vancouver.....	P.C.
Victoria.....	81,559	51,401	40,436	17,981	A. D. McPHILLIPS.....	Victoria.....	P.C.
Yukon Territory— (1 member)							
Yukon.....	12,190	5,516	4,892	2,422	J. A. SIMMONS.....	Whitehorse.....	Lib.
Northwest Territories— (1 member)							
Mackenzie River.....	12,492	6,434	4,043	2,686	M. A. HARDIE.....	Yellowknife.....	Lib.

11.—By-elections from the Date of the General Election, June 10, 1957 to Oct. 15, 1957¹

Electoral District and Province	Date of By-election	Voters on List	Candidates	Votes Polled	Name of New Member	P.O. Address	Party Affiliation
		No.	No.	No.			
Lanark.....	Aug. 26, 1957	22,053	Acclamation		GEORGE H. DOUCETTE	Carleton Place....	P.C.

¹ By-elections from Oct. 15, 1957 to date of going to press are included in an Appendix to this volume.

Indemnities and Allowances.—Members of the Senate receive a sessional allowance at the rate of \$8,000 per annum. In addition they receive at the end of each calendar year an annual expense allowance of \$2,000 which is subject to income tax. Members of the House of Commons are paid a sessional allowance at the rate of \$8,000 per annum. In addition they receive \$2,000 as an expense allowance paid at the end of each calendar year. This allowance, except that for Ministers of the Crown and for Leaders of the Opposition in the House and in the Senate, is not subject to income tax. The remuneration of the Prime Minister is \$25,000 a year and of a Cabinet Minister and the Leader of the Opposition \$15,000 a year in addition to the sessional allowance and expense allowance each receives as a Member of Parliament. A Cabinet Minister is also entitled to a motor car allowance of \$2,000. The Speakers of the Senate and of the House of Commons each

receive, besides the sessional allowance and expense allowance, a salary of \$9,000 and a motor car allowance of \$1,000 and each is entitled to \$3,000 in lieu of a residence. The Deputy Speaker of the House of Commons receives a salary of \$6,000 and an allowance of \$1,500 in lieu of a residence. The Deputy Chairman of Committees receives an annual allowance of \$2,000. Parliamentary Assistants to the Ministers of the Crown receive \$8,000 sessional allowance as Members of Parliament, \$4,000 a year as Parliamentary Assistants and the \$2,000 expense allowance paid to all Members of Parliament.

The Federal Franchise.—The present federal franchise laws are contained in the Canada Elections Act (R.S.C. 1952, c. 23). The franchise is conferred upon all Canadian citizens or British subjects, men and women who have attained the age of 21 years and who have been ordinarily resident in Canada for 12 months prior to polling day at a federal election and ordinarily resident in the electoral district on the date of the issue of the writ ordering such election. Persons denied the right to vote are:—

- (1) The Chief Electoral Officer and the Assistant Chief Electoral Officer;
- (2) Judges appointed by the Governor General in Council;
- (3) The returning officer for each electoral district;
- (4) Persons undergoing punishment as inmates of any penal institution for the commission of any offence;
- (5) Indians ordinarily resident on an Indian reserve who were not members of His Majesty's Forces in World Wars I or II or who did not execute a waiver of exemption under the Indian Act from taxation on and in respect of personal property;
- (6) Persons restrained of their liberty or deprived of the management of their property by reason of mental disease;
- (7) Persons disqualified under any law relating to the disqualification of electors for corrupt and illegal practices.

The Canadian Forces Voting Regulations set out in the Schedule to the Canada Elections Act prescribe voting procedure for members of the Armed Forces of Canada and also for veterans in receipt of treatment or domiciliary care in certain institutions.

12.—Voters on the Lists and Votes Polled at the Federal General Elections of 1945, 1949, 1953 and 1957

NOTE.—Corresponding statistics for the general elections of 1911, 1917, 1921 and 1925 are given in the 1926 Year Book, p. 82; those for 1926 in the 1945 edition, p. 66; those for 1930 and 1935 in the 1948-49 edition, p. 94; and for 1940 in the 1956 edition, p. 81.

Province or Territory	Voters on the Lists				Votes Polled			
	1945	1949	1953	1957	1945	1949	1953	1957
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland.....	...	182,439	194,715	197,239	...	105,190	111,768	92,858
Prince Edward Island.....	54,794	55,772	55,469	54,224	63,807 ¹	68,393 ¹	66,562 ¹	67,218 ¹
Nova Scotia.....	362,754	373,585	380,836	384,948	312,954 ²	338,928 ²	334,855 ²	394,130 ²
New Brunswick.....	262,261	286,723	287,657	291,036	204,273	225,877	225,390	237,001
Quebec.....	1,956,225	2,177,152	2,352,619	2,504,978	1,433,591	1,610,510	1,565,400	1,815,586
Ontario.....	2,457,937	2,718,118	2,894,150	3,100,456	1,831,806	2,042,294	1,938,959	2,295,033
Manitoba.....	433,921	451,882	465,374	473,802	327,794	324,079	276,422	351,827
Saskatchewan.....	445,601	472,884	480,532	484,318	379,539	375,471	356,479	392,266
Alberta.....	430,430	492,228	548,747	591,043	315,863	341,222	343,258	431,184
British Columbia.....	545,077	673,782	730,882	802,017	433,402	464,785	475,456	596,424
Yukon Territory ³	3,445	9,064	5,028	5,516	2,164	6,823	3,818	4,892
Northwest Territories ⁴.....	...	...	5,682	6,434	...	...	3,596	4,043
Totals.....	6,952,445	7,893,629	8,401,691	8,896,011	5,305,193	5,903,572	5,701,963	6,682,162

¹ Each voter in the double-member constituency of Queens County, P.E.I. had two votes; in 1957, 24,834 voters on the list cast 41,853 votes.

² Each voter in the double-member constituency of Halifax, N.S. had two votes; in 1957, 108,433 voters on the list cast 163,067 votes.

³ Electoral District of Yukon.

⁴ Electoral District of Mackenzie River.

Subsection 3.—The Judiciary

The Federal Judiciary

The Parliament of Canada is empowered by Sect. 101 of the British North America Act to provide from time to time for the constitution, maintenance and organization of a general Court of Appeal for Canada and for the establishment of any additional courts for the better administration of the laws of Canada. Under this provision, Parliament has established the Supreme Court of Canada, the Exchequer Court of Canada and certain miscellaneous courts.

Supreme Court of Canada.—This Court, first established in 1875 and now governed by the Supreme Court Act (R.S.C. 1952, c. 259), consists of a chief justice, who is called the Chief Justice of Canada, and eight puisne judges. The chief justice and the puisne judges are appointed by the Governor in Council and they hold office during good behaviour but are removable by the Governor General on address of the Senate and the House of Commons. They cease to hold office upon attaining the age of 75 years. The Court sits at Ottawa and exercises general appellate jurisdiction throughout Canada in civil and criminal cases. The Court is also required to consider and advise upon questions referred to it by the Governor in Council and it may also advise the Senate or the House of Commons on Private Bills referred to the Court under any rules or orders of the Senate or the House of Commons.

Appeals may be brought from any final judgment of the highest court of final resort in a province in any case where the amount or value of the matter in controversy exceeds the sum of \$10,000. An appeal may be brought from any other final judgment with leave of the highest court of final resort in the province; if such court refuses to grant leave the Supreme Court of Canada may grant leave to appeal. The Supreme Court may grant leave to appeal from any judgment whether final or not. Appeals in respect of indictable offences are regulated by the Criminal Code. Appeals from federal courts are regulated by the statute establishing such courts. The judgment of the Supreme Court of Canada in all cases is final and conclusive.

13.—Chief Justice and Judges of the Supreme Court of Canada as at Oct. 15, 1957¹

(In order of seniority)

Name	Date of Appointment
The Hon. Chief Justice PATRICK KERWIN.....	July 1, 1954 ²
The Hon. Justice ROBERT TASCHEREAU.....	Feb. 9, 1940
The Hon. Justice I. C. RAND.....	Apr. 22, 1943
The Hon. Justice ROY L. KELLOCK.....	Oct. 3, 1944
The Hon. Justice CHARLES H. LOCKE.....	June 3, 1947
The Hon. Justice JOHN R. CARTWRIGHT.....	Dec. 23, 1949
The Hon. Justice J. H. GERALD FAUTEUX.....	Dec. 23, 1949
The Hon. Justice DOUGLAS CHARLES ABBOTT.....	July 1, 1954

¹ One vacancy at Oct. 15, 1957.

² First appointed as a Judge of the Supreme Court, July 20, 1935.

Exchequer Court.—The Exchequer Court of Canada was first established in 1875 as part of the Supreme Court of Canada but is now a separate court governed by the Exchequer Court Act (R.S.C. 1952, c. 98). The Court consists of a president and four puisne judges who are appointed by the Governor in Council. The president and the puisne judges hold office during good behaviour but may be removed by the Governor General on address of the Senate and the House of Commons. They cease to hold office upon attaining the age of 75 years. The Court sits at Ottawa and also at any other place in Canada where sittings may be fixed by the Court. The jurisdiction of the Court extends to cases where claims are made by or against the Crown in right of Canada. Proceedings against the Crown are taken by petition of right pursuant to the Petition of Right Act (R.S.C. 1952, c. 210).

An appeal lies to the Supreme Court of Canada from any final judgment of the Exchequer Court in which the amount in controversy exceeds \$500; an appeal also lies with leave of the Supreme Court in certain cases where the amount in controversy does not exceed \$500 or where the judgment is not final.

The Exchequer Court also exercises admiralty jurisdiction in Canada. This was first conferred in 1891 by the Admiralty Act (54-55 Vict., c. 29) and is now governed by the Admiralty Act (R.S.C. 1952, c. 1). Under this Statute the Exchequer Court is continued as a Court of Admiralty. The president and puisne judges of the Exchequer Court exercise admiralty jurisdiction throughout the whole of Canada. In addition, Canada is divided into various admiralty districts; a district judge in admiralty is appointed for each district. Appeals to the Supreme Court of Canada from judgments of the president or the puisne judges are governed by the general appeal provisions in the Exchequer Court Act. Appeals may be taken from a final judgment of a district judge in admiralty either to the Exchequer Court or direct to the Supreme Court of Canada.

Miscellaneous Courts.—*Railway Act.*—The Railway Act, 1903 (R.S.C. 1952, c. 234) established the Board of Railway Commissioners for Canada as a court of record; by the Transport Act, 1938 (R.S.C. 1952, c. 271) the name was changed to the Board of Transport Commissioners for Canada. This Court exercises jurisdiction with respect to railway matters. The Governor in Council is given jurisdiction to vary any order of the Board and an appeal lies from the Board to the Supreme Court of Canada upon a question of jurisdiction or a question of law.

Bankruptcy Act.—By virtue of Sect. 91 (21) of the British North America Act, 1867, Parliament has exclusive legislative jurisdiction in relation to bankruptcy and insolvency. By the Bankruptcy Act (R.S.C. 1952, c. 14) the superior courts of the provinces are constituted bankruptcy courts; original jurisdiction is conferred upon the trial courts and appellate jurisdiction is conferred upon the appeal courts of the provinces.

Income Tax Appeal Board.—By the Income Tax Act (R.S.C. 1952, c. 148) an Appeal Board is established consisting of a chairman and not fewer than two or more than four members with jurisdiction over appeals against income tax assessments. A further appeal may be taken to the Exchequer Court.

Provincial Judiciaries*

Certain provisions of the British North America Act govern to some extent the provincial judiciaries. Under Sect. 92 (14) the legislature of each province exclusively may make laws in relation to the administration of justice in the province including the constitution, maintenance and organization of provincial courts both of civil and of criminal jurisdiction. Sect. 96 provides that the Governor General shall appoint the judges of the superior, district, and county courts in each province except those of the courts of probate in Nova Scotia and New Brunswick. Sect. 100 provides that the salaries, allowances and pensions of judges of the superior, district and county courts (except the courts of probate in Nova Scotia and New Brunswick) are to be fixed and provided by the Parliament of Canada and these are set out in the Judges Act (R.S.C. 1952, c. 157). Under

* More detailed information concerning provincial judiciaries is given in the 1954 Year Book, pp. 48-55.

Sect. 99 the judges of the superior courts hold office during good behaviour but are removable by the Governor General on address of the Senate and House of Commons. The tenure of office of district and county court judges is fixed by the Judges Act as being during good behaviour and their residence within the county or union of counties for which the court is established.

All provinces have minor courts with limited civil and criminal jurisdiction, the judges of which are appointed by provincial authority as, for example, Justices of the Peace, Magistrates and Juvenile Court Judges. Except in Quebec there are County or District Courts of each province with limited jurisdiction varying from \$500 to \$2,500 in amount. Each province has a Superior Court with virtually unlimited jurisdiction variously known as Court of Queen's Bench, Supreme Court, Superior Court, etc. There is also a Court of Appeal in each province.

Section 2.—Provincial and Territorial Governments*

In each of the provinces, the Queen is represented by a Lieutenant-Governor appointed by the Governor General in Council. The Lieutenant-Governor acts on the advice and with the assistance of his Ministry or Executive Council which is responsible to the Legislature and resigns office under circumstances similar to those described at p. 43 concerning the Federal Government.

The Legislature of each province is unicameral, consisting of the Lieutenant-Governor and a Legislative Assembly except for the Province of Quebec where there is a Legislative Council as well as a Legislative Assembly.

The Legislative Assembly is elected by the people for a statutory term of five years but may be dissolved within that period by the Lieutenant-Governor on the advice of the Premier of the province.

The source of legislative authority of the Provincial Legislatures is the British North America Act, 1867 (30-31 Vict., c. 3 and amendments). Under Sect. 92 of the Act the Legislature of each province exclusively may make laws in relation to the following matters: amendment of the constitution of the province except as regards the Lieutenant-Governor; direct taxation within the province; borrowing of money on the credit of the province; establishment and tenure of provincial offices and appointment and payment of provincial officers; the management and sale of public lands belonging to the province and of the timber and wood thereon; the establishment, maintenance and management of public and reformatory prisons in and for the province; the establishment, maintenance and management of hospitals, asylums, charities and eleemosynary institutions in and for the province, other than marine hospitals; municipal institutions in the province; shop, saloon, tavern, auctioneer and other licences issued for the raising of provincial or municipal revenue; local works and undertakings other than interprovincial or international lines of ships, railways, canals, telegraphs, etc., or works which, though wholly situated within one province, are declared by the Federal Parliament to be for the general advantage either of Canada or of two or more provinces; the incorporation of companies with provincial objects; the solemnization of marriage in the province; property and civil rights in the province; the administration of justice in the province including the constitution, maintenance and organization of provincial courts both of civil and of criminal jurisdiction including procedure in civil matters in these courts; the imposition of punishment by fine, penalty or imprisonment for enforcing any law of the province relating to any of the aforesaid subjects; generally all matters of a merely local or private nature in the province.

Further, in and for each province the Legislature exclusively may, under Sect. 93, make laws in relation to education subject to certain restrictions relating to the establishment of schools by religious minorities. These powers with similar restrictions were conferred on the more recently admitted provinces on their inclusion as units in the federation.

* The information given in Subsections 1 to 10 of this Section is brought up to Mar. 31, 1957, except where otherwise indicated. Provincial elections held between the date shown in each case and the date of going to press are covered in an Appendix to this volume.

The Provincial Legislatures may also make laws under Sect. 95 in relation to agriculture and immigration subject to any laws of the Parliament of Canada in relation to these subjects.

Provincial Franchise.—Details regarding qualifications and disqualifications of the franchise are contained in the Elections Act of each province. In general, every person, male or female, at the age of 21 years, who is a Canadian citizen or a British subject, who complies with certain residence requirements in the province and the electoral district of polling and who falls under no statutory disqualifications, is entitled to vote. These qualifications apply with modifications to voters in most provinces. The principal exception gives voting privileges to persons in Saskatchewan at the age of 18 and in Alberta and British Columbia at 19 years.

Subsection 1.—Newfoundland

The Government of Newfoundland consists of a Lieutenant-Governor, an Executive Council and a Legislative Assembly. At May 1, 1957, Colonel the Honourable Sir Leonard Outerbridge was Lieutenant-Governor of the Province; he was commissioned on Sept. 5, 1949.

The Legislative Assembly has 36 members elected for a term of five years. The Legislature elected Oct. 2, 1956 is the 31st in the history of Newfoundland and the 3rd since Confederation.

The Premier and each Cabinet Minister receives a salary of \$7,000 per annum plus a sessional indemnity of \$3,000. Each Member of the House of Assembly receives a sessional indemnity of \$3,000. An additional allowance of \$2,000 is made to the Leader of the Opposition.

14.—Legislatures of Newfoundland since Confederation and Ministry as at May 1, 1957

Legislatures 1949-57

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
May 27, 1949	1st.....	4	July 13, 1949	Nov. 3, 1951
Nov. 26, 1951	2nd.....	7	Mar. 12, 1952	Sept. 10, 1956
Oct. 2, 1956	3rd.....	1	Mar. 20, 1957	1

¹ Life of Legislature not expired at May 1, 1957.

First Ministry

(Party standing at latest General Election, Oct. 2, 1956: 32 Liberals and 4 Progressive Conservatives.)

NOTE.—Date of appointment does not necessarily mean that the Minister was sworn in on date given.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and Minister of Economic Development.....	Hon. J. R. SMALLWOOD.....	Apr. 1, 1949	Apr. 1, 1949
Attorney General.....	Hon. L. R. CURTIS.....	Apr. 1, 1949	Apr. 1, 1949
Minister of Mines and Resources.....	Hon. W. J. KEOUGH.....	July 29, 1949	May 1, 1957
Minister of Labour.....	Hon. C. H. BALLAM.....	Apr. 4, 1950	Apr. 4, 1950
Minister of Public Welfare.....	Hon. S. J. HEFFERTON.....	July 29, 1949	Apr. 10, 1955
Minister of Finance.....	Hon. E. S. SPENCER.....	July 29, 1949	May 1, 1957
Minister of Public Works.....	Hon. J. R. CHALKER.....	Apr. 4, 1950	May 1, 1957
Minister of Education.....	Hon. F. W. ROWE.....	May 21, 1952	May 1, 1957
Minister without portfolio.....	Hon. P. J. LEWIS.....	Dec. 15, 1951	Dec. 15, 1951
Minister of Provincial Affairs.....	Hon. MYLES P. MURRAY.....	Dec. 15, 1951	Dec. 15, 1951
Solicitor General.....	Hon. MYLES P. MURRAY.....	Dec. 15, 1951	Apr. 10, 1955
Minister of Highways.....	Hon. G. J. POWER.....	Dec. 15, 1951	May 1, 1957
Minister of Fisheries.....	Hon. J. T. CHEESEMAN.....	May 1, 1957	May 1, 1957
Minister of Municipal Affairs and Supply.....	Hon. B. J. ABBOTT.....	May 1, 1957	May 1, 1957
Minister of Health.....	Hon. J. M. McGRATH.....	May 1, 1957	May 1, 1957

Subsection 2.—Prince Edward Island

The Government of Prince Edward Island consists of a Lieutenant-Governor, an Executive Council and a Legislative Assembly. The Honourable T. W. L. Prowse, Lieutenant-Governor of the Province at Mar. 31, 1957, was commissioned to office on Oct. 4, 1950. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 86.

The General Assembly elected May 25, 1955, is the 48th in the history of Prince Edward Island Legislatures and the 23rd since Confederation. It has 30 members from 15 electoral districts who serve for a statutory term of five years. One-half of the Members of the Legislative Assembly are elected on a property vote. Each district elects one Councillor (elected on a property vote) and one Assembly member (elected on a general franchise vote).

The annual salary of the Premier is \$6,000 and each Cabinet Minister, with two exceptions, receives \$4,000; the Minister of Education and the Minister of Health each receive \$3,000. Each Member of the Assembly is paid the sum of \$1,450 for each session attended by him and an additional amount of \$500 tax free as indemnity for expenses incurred. The Speaker is paid an additional sum of \$400 and a further additional amount of \$200 tax free as an indemnity. The Leader of the Opposition is paid an additional sum of \$800 and a further additional amount of \$200 tax free for expenses incurred by him in performance of official duties.

15.—Legislatures and Premiers of Prince Edward Island 1935-57 and Ministry as at Mar. 31, 1957

Legislatures 1935-57¹

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
July 23, 1935	18th.....	5	Sept. 25, 1935	Apr. 21, 1939
May 18, 1939	19th.....	4	Mar. 20, 1940	Aug. 20, 1943
Sept. 15, 1943	20th.....	4	Feb. 15, 1944	Oct. 27, 1947
Dec. 11, 1947	21st.....	5	Feb. 24, 1948	Mar. 30, 1951
Apr. 26, 1951	22nd.....	6	Oct. 23, 1951	Apr. 27, 1955
May 25, 1955	23rd.....	2	Feb. 2, 1956	2

¹ The Ministries from 1935-57 were: 19th Ministry sworn in Oct. 14, 1933 under the leadership of Hon. W. J. P. MacMillan; 20th Ministry sworn in Aug. 15, 1935 under the leadership of Hon. W. M. Lea; 21st Ministry sworn in Jan. 14, 1936 under the leadership of Hon. T. A. Campbell; 22nd Ministry sworn in May 11, 1943 under the leadership of Hon. J. Walter Jones; 23rd Ministry sworn in May 25, 1953 under the leadership of Hon. A. W. Matheson.

² Legislature not expired at Mar. 31, 1957.

Twenty-Third Ministry

(Party standing at latest General Election, May 25, 1955: 27 Liberals and 3 Progressive Conservatives.)

NOTE.—Ministers are shown at date of original appointment as a Minister and at date of appointment to present portfolio, despite the formation of a new Ministry consequent upon the appointment of a new Premier. Date of appointment does not necessarily mean that the Minister was sworn in on date given.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, Attorney and Advocate General and President of the Executive Council....	HON. ALEXANDER W. MATHESON..	May 11, 1943	{ May, 25, 1953 June 15, 1955
Minister of Public Works and Minister of Industry and Natural Resources and of Fisheries.....	HON. DOUGALD MACKINNON.....	Sept. 16, 1939	June 15, 1955
Minister of Welfare and Minister of Labour....	HON. F. W. PHILLIPS.....	Apr. 3, 1956	Apr. 3, 1956
Minister of Agriculture.....	HON. EUGENE CULLEN.....	Apr. 16, 1949	June 15, 1955
Minister of Education.....	HON. KEIR CLARK.....	June 16, 1951	June 15, 1955
Provincial Secretary and Treasurer.....	HON. B. EARLE MACDONALD.....	May 25, 1953	June 15, 1955
Minister of Highways.....	HON. J. GEORGE MACKAY.....	Jan. 18, 1955	June 15, 1955
Minister of Health.....	HON. M. LORNE BONNELL.....	June 15, 1955	June 15, 1955
Minister without portfolio.....	HON. EDWARD P. FOLEY.....	June 10, 1954	June 15, 1955

Subsection 3.—Nova Scotia

The Government of the Province of Nova Scotia has a Lieutenant-Governor, an Executive Council and a House of Assembly. The Honourable Alistair Fraser, Lieutenant-Governor at Mar. 31, 1957, was commissioned to office Sept. 1, 1952. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 87.

The Legislature has 43 members elected for five years, the maximum duration of its existence. The Legislature elected Oct. 30, 1956, was the 46th in Nova Scotia's history and the 23rd since Confederation.

The Premier of the Province receives a salary of \$12,000 per annum and each Cabinet Minister a salary of \$10,000 per annum. Each Member of the House of Assembly receives a sessional indemnity of \$2,400 and an allowance of \$1,200 for expenses incidental to the discharge of his duties. The Leader of the Opposition receives an allowance of \$3,000 in addition to his sessional indemnity.

16.—Legislatures and Premiers of Nova Scotia 1933-57 and Ministry as at Mar. 31, 1957

Legislatures 1933-57¹

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Aug. 22, 1933	17th.....	4	Mar. 1, 1934	May 20, 1937
June 29, 1937	18th.....	4	Mar. 1, 1938	Sept. 19, 1941
Oct. 28, 1941	19th.....	4	Feb. 19, 1942	Sept. 12, 1945
Oct. 23, 1945	20th.....	4	Mar. 14, 1946	Apr. 27, 1949
June 9, 1949	21st.....	4	Mar. 21, 1950	Apr. 14, 1953
May 26, 1953	22nd.....	3	Feb. 24, 1954	Sept. 20, 1956
Oct. 30, 1956	23rd.....	2	Feb. 27, 1957	²

¹ The Ministries from 1933-57 were: 12th Ministry sworn in Sept. 5, 1933 under the leadership of Hon. Angus L. Macdonald; 13th Ministry sworn in July 10, 1940 under the leadership of Hon. A. S. MacMillan; 14th Ministry sworn in Sept. 8, 1945 under the leadership of Hon. Angus L. Macdonald; 15th Ministry sworn in Apr. 13, 1954 under the leadership of Hon. Harold Connolly; 16th Ministry sworn in Sept. 30, 1954 under the leadership of Hon. Henry D. Hicks; 17th Ministry sworn in Nov. 20, 1956 under the leadership of Hon. Robert L. Stanfield. ² Life of Legislature not expired at Mar. 31, 1957.

Seventeenth Ministry

(Party standing at latest General Election, Oct. 30, 1956: 24 Progressive Conservatives, 18 Liberals, 1 Co-operative Commonwealth Federation.)

NOTE.—Date of appointment does not necessarily mean that the Minister was sworn in on date given.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, Provincial Treasurer, Minister of Education, Chairman of the Nova Scotia Power Commission.....	Hon. R. L. STANFIELD.....	Nov. 20, 1956	Nov. 20, 1956
Minister of Highways and Provincial Secretary.....	Hon. G. I. SMITH.....	Nov. 20, 1956	Nov. 20, 1956
Attorney General, Minister of Public Health and Minister of Public Welfare.....	Hon. R. A. DONAHOE.....	Nov. 20, 1956	Nov. 20, 1956
Minister of Lands and Forests and Minister of Municipal Affairs.....	Hon. R. C. LEVY.....	Nov. 20, 1956	Nov. 20, 1956
Minister of Public Works and Minister of Labour.....	Hon. S. T. PYKE.....	Nov. 20, 1956	Nov. 20, 1956
Minister of Agriculture and Marketing.....	Hon. E. D. HALIBURTON.....	Nov. 20, 1956	Nov. 20, 1956
Minister of Mines and Minister of Trade and Industry.....	Hon. E. A. MANSON.....	Nov. 20, 1956	Nov. 20, 1956
Minister without portfolio.....	Hon. N. L. FERGUSON.....	Nov. 20, 1956	Nov. 20, 1956

Subsection 4.—New Brunswick

The Government of New Brunswick has a Lieutenant-Governor, an Executive Council and a House of Assembly. The Honourable David Laurence MacLaren, Lieutenant-Governor at Mar. 31, 1957, was commissioned to office Nov. 1, 1945. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 89.

The Legislature elected June 18, 1956, is the 43rd in New Brunswick's history and the 16th since Confederation. It has 52 members who are elected for a statutory term of five years.

The Premier receives \$5,000 per annum in addition to the salary for any other portfolio he may hold. The salary of each Cabinet Minister is \$7,500, the amount paid as indemnity to each Member of the House of Assembly is \$2,400, plus an additional \$1,200 allowance for expenses. The Leader of the Opposition receives an additional \$3,000. An allowance of \$1,000 in addition to the regular indemnity is made to the Speaker.

17.—Legislatures and Premiers of New Brunswick 1935-57 and Ministry as at Mar. 31, 1957

Legislatures 1935-57¹

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 27, 1935	11th.....	4	Mar. 5, 1936	Oct. 26, 1939
Nov. 20, 1939	12th.....	5	Apr. 4, 1940	July 10, 1944
Aug. 28, 1944	13th.....	4	Feb. 20, 1945	May 18, 1948
June 28, 1948	14th.....	4	Mar. 8, 1949	July 16, 1952
Sept. 22, 1952	15th.....	4	Feb. 12, 1953	Apr. 17, 1956
June 18, 1956	16th.....	2	Feb. 21, 1957	2

¹ The Ministries from 1935-57 were: 20th Ministry sworn in July 16, 1935 under the leadership of Hon. A. A. Dysart; 21st Ministry sworn in Mar. 13, 1940 under the leadership of Hon. J. B. McNair; 22nd Ministry sworn in Oct. 8, 1952 under the leadership of Hon. H. J. Flemming.

² Life of Legislature not expired at Mar. 31, 1957.

Twenty-Second Ministry

(Party standing at latest General Election, June 18, 1956: 37 Conservatives and 15 Liberals.)

NOTE.—Date of appointment does not necessarily mean that the Minister was sworn in on date given.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and Minister of Public Works.....	HON. HUGH JOHN FLEMMING.....	Oct. 8, 1952	Oct. 8, 1952
Attorney General.....	HON. WILLIAM J. WEST.....	Oct. 8, 1952	Oct. 8, 1952
Provincial Secretary-Treasurer.....	HON. D. D. PATTERSON.....	Oct. 8, 1952	Oct. 8, 1952
Minister of Agriculture.....	HON. C. B. SHERWOOD.....	Oct. 8, 1952	Oct. 8, 1952
Minister of Health and Social Services.....	HON. J. F. MCINERNEY.....	Oct. 8, 1952	Oct. 8, 1952
Minister of Lands and Mines.....	HON. N. B. BUCHANAN.....	Oct. 8, 1952	Oct. 8, 1952
Minister of Education.....	HON. CLAUDE D. TAYLOR.....	Oct. 8, 1952	Oct. 8, 1952
Minister of Labour.....	HON. ARTHUR E. SKALING.....	Oct. 8, 1952	Oct. 8, 1952
Minister of Industry and Development.....	HON. J. ROGER PICHETTE.....	Oct. 8, 1952	Oct. 8, 1952
Minister of Municipal Affairs and President of the Executive Council.....	HON. T. BARTRITT PARLEE.....	Oct. 8, 1952	June 1, 1954 Oct. 8, 1952
Minister without portfolio and Chairman of the New Brunswick Electric Power Commission.....	HON. EDGAR FOURNIER.....	Oct. 8, 1952	Oct. 8, 1952

Subsection 5.—Quebec

The Government of Quebec consists of a Lieutenant-Governor, an Executive Council, and a bicameral legislature—the Legislative Council and the Legislative Assembly. The Honourable Gaspard Fauteux, Lieutenant-Governor at Mar. 31, 1957, was commissioned to office Oct. 3, 1950. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 90.

The Legislative Council has 24 members nominated for life by the Lieutenant-Governor in Council. The Legislative Assembly has 93 elected members and, like the Legislative Council, has the power to bring forward Bills relating to civil and administrative matters and to the amendment or repeal of laws that already exist. A Bill to be approved by the

Lieutenant-Governor must have received the assent of both Houses. Only the Legislative Assembly can bring forward a Bill requiring the expenditure of public money. The maximum life of a Legislature is five years.

Salaries and allowances of the Premier, Members of the Executive Council, Legislative Council and Legislative Assembly are fixed according to R.S.Q. 1941, c. 7 and R.S.Q. 1941, c. 4 as amended by 1-2 Eliz. II, c. 38 and 5-6 Eliz. II, c. 51. All Members of Legislative Assembly and Legislative Council receive \$5,000 per annum as salary and \$2,000 by way of allowances; in addition, the Premier receives \$10,000 as salary, \$4,000 allowances and \$2,000 for lodging allowance; Ministers with portfolio an additional \$8,000 as salary and \$2,000 allowances; Ministers without portfolio an additional \$5,000 salary and \$2,000 allowances; the Leader of the Opposition in the Legislative Assembly \$6,000 as salary, \$2,000 allowances and \$2,000 for lodging allowance; and the Leader of the Government in the Legislative Council and the Leader of the Opposition in the Legislative Council each receive \$7,000 as salary, \$2,000 allowances and \$3,000 for office allowances.

18.—Legislatures and Premiers of Quebec 1935-57 and the Ministry and Members of the Legislative Council as at Mar. 31, 1957

Legislatures 1935-57¹

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Nov. 25, 1935	19th.....	1	Mar. 24, 1936	June 11, 1936
Aug. 17, 1936	20th.....	4	Oct. 7, 1936	Sept. 23, 1939
Oct. 25, 1939	21st.....	5	Feb. 20, 1940	June 29, 1944
Aug. 8, 1944	22nd.....	4	Feb. 7, 1945	June 9, 1948
July 28, 1948	23rd.....	4	Jan. 19, 1949	May 28, 1952
July 16, 1952	24th.....	4	Nov. 12, 1952	Apr. 25, 1956
June 20, 1956	25th.....	2	Nov. 14, 1956	2

¹ The Ministries from 1935-57 were: 16th Ministry sworn in July 8, 1920 under the leadership of Hon. L. A. Taschereau; 17th Ministry sworn in June 11, 1936 under the leadership of Hon. A. Godbout; 18th Ministry sworn in Aug. 24, 1936 under the leadership of Hon. Maurice L. Duplessis; 19th Ministry sworn in Nov. 10, 1939 under the leadership of Hon. A. Godbout; 20th Ministry sworn in Aug. 30, 1944 under the leadership of Hon. Maurice L. Duplessis.

² Life of Legislature not expired at Mar. 31, 1957.

Twentieth Ministry

(Party standing at latest General Election, June 20, 1956: 72 Union Nationale, 20 Liberals, 1 Independent.)

NOTE.—See headnote to Table 15.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and President of the Executive Council.....	Hon. MAURICE L. DUPLESSIS.....	Aug. 24, 1936	Aug. 30, 1944
Minister of Finance.....	Hon. ONÉSIME GAGNON.....	Oct. 6, 1936	Aug. 30, 1944
Minister of Lands and Forests and of Hydraulic Resources.....	Hon. JOHN S. BOURQUE.....	Aug. 24, 1936	Aug. 30, 1944
Minister of Health.....	Hon. J. H. ALBINY PAQUETTE.....	Aug. 24, 1936	Aug. 30, 1944
Minister of Colonization.....	Hon. J. D. BÉGIN.....	Aug. 30, 1944	Aug. 30, 1944
Minister without Portfolio.....	Hon. ANTONIO ELIE.....	Aug. 24, 1936	Aug. 30, 1944
Minister of Agriculture.....	Hon. LAURENT BARIÉ.....	Aug. 30, 1944	Aug. 30, 1944
Minister of Roads.....	Hon. ANTONIO TALBOT.....	Aug. 30, 1944	Aug. 30, 1944
Minister of Labour.....	Hon. ANTONIO BARRETT.....	Aug. 30, 1944	Aug. 30, 1944
Minister of Game and Fisheries.....	Hon. CAMILLE POTLIOT.....	Aug. 30, 1944	Aug. 30, 1944
Minister of Public Works.....	Hon. ROMÉO LORRAIN.....	Aug. 30, 1944	Aug. 30, 1944
Minister of Social Welfare and of Youth.....	Hon. JEAN-PAUL SAUVÉ.....	Sept. 18, 1946	Sept. 18, 1946
Minister of Trade and Commerce.....	Hon. PAUL BEAULIEU.....	Aug. 30, 1944	Aug. 30, 1944
Provincial Secretary.....	Hon. YVES PRÉVOST.....	Sept. 26, 1956	Sept. 26, 1956
Minister of Transportation and Communications and Solicitor General.....	Hon. ANTOINE RIVARD.....	Dec. 15, 1948	Apr. 12, 1950
Minister of Municipal Affairs.....	Hon. PAUL DOZIS.....	Sept. 26, 1956	Sept. 26, 1956
Minister of Mines.....	Hon. W. M. COTTINGHAM.....	June 2, 1954	June 2, 1954
Minister without Portfolio.....	Hon. ARTHUR LECLERC.....	July 23, 1952	July 23, 1952
Minister without Portfolio.....	Hon. WILFRID LABBÉ.....	July 23, 1952	July 23, 1952
Minister without Portfolio.....	Hon. JACQUES MIQUELON.....	July 23, 1952	July 23, 1952

Legislative Council
(According to seniority)

Name	Division	Date of Appointment
R. O. GROTHÉ.....	De Salaberry.....	Dec. 23, 1927
ELISÉE THÉRIAULT.....	Kennebec.....	Apr. 23, 1929
JACOB NICOL.....	Bedford.....	Sept. 16, 1929
VICTOR MARCHAND.....	Rigaud.....	Apr. 15, 1932
HECTOR LAFERTÉ.....	Stadacona.....	July 23, 1934
EMILE MOREAU.....	Lauzon.....	June 6, 1935
ALPHONSE RAYMOND.....	De Lorimier.....	Aug. 28, 1936
J. L. BARIBEAU (Speaker).....	Shawinigan.....	Jan. 14, 1938
PHILIPPE BRAIS.....	Grandville.....	Feb. 16, 1940
JULES BRILLANT.....	Golfe.....	Jan. 14, 1942
FRANK L. CONNORS.....	Mille Isles.....	Jan. 14, 1942
ROBERT R. NESS.....	Inkerman.....	Jan. 14, 1942
FÉLIX MESSIER.....	De Lanaudière.....	Feb. 12, 1942
EDOUARD ASSELIN.....	Wellington.....	Jan. 23, 1946
GEO. B. FOSTER.....	Victoria.....	Aug. 22, 1946
GÉRALD MARTINEAU.....	Les Laurentides.....	Aug. 22, 1946
J. OLIER RENAUD.....	Alma.....	Aug. 22, 1946
PATRICE TARDIF.....	De la Vallière.....	July 20, 1952
JOSEPH BOULANGER.....	De la Durantaye.....	Oct. 8, 1952
EDOUARD MASSON.....	Repentigny.....	Mar. 12, 1953
ALBERT BOUCHARD.....	La Salle.....	Nov. 24, 1954
JEAN BARRETTE.....	Sorel.....	Oct. 19, 1955
EMILE LESAGE.....	Montarville.....	Aug. 1, 1956
Vacant.....	Rougemont.....	...

Subsection 6.—Ontario

The Government of Ontario consists of a Lieutenant-Governor, an Executive Council and a House of Assembly. The Honourable Louis O. Breithaupt, LL.D., Lieutenant-Governor of the Province at Mar. 31, 1957, was commissioned to office Jan. 24, 1952. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 92.

The House of Assembly, the single-chamber Legislature of the Province, is composed of 98 members elected for a statutory term of five years.

Besides the regular Departments of Government, the Niagara Parks Commission, the Ontario Municipal Board, The Hydro-Electric Power Commission of Ontario, the Ontario-St. Lawrence Development Commission, the Ontario Northland Transportation Commission, the Liquor Control Board, the Liquor Licence Board, the Hospital Services Commission and The Water Resources Commission have been created.

Under the provisions of the Legislative Assembly Act (R.S.O. 1950, c. 202, as amended 1956, c. 39) each Member of the Assembly is paid an annual indemnity of \$3,600 and an allowance for expenses of \$1,800. In addition, the Speaker receives a special indemnity at the annual rate of \$3,000 and an expense allowance of \$2,000; the Chairman of the Committee of the Whole a special indemnity at the annual rate of \$1,000; and the Leader of the Opposition a special indemnity of \$3,000 and an annual allowance of \$2,000 for expenses. Each Member of the Cabinet having charge of a Department receives the ordinary indemnity as a Member of the Legislature in addition to his salary as a Minister of the Crown. The salary provided in the Executive Council Act for the Premier is \$14,000 and for a Cabinet Minister having charge of a Department \$10,000. A Minister without Portfolio receives only the indemnity and expense allowance of a Member of the Legislature. By the 1956 amendment, every Minister of the Crown in charge of a Department, the Minister of the Crown who is a member of The Hydro-Electric Power Commission of Ontario, and the Leader of the Opposition receive a representation allowance of \$2,000 per annum.

19.—Legislatures and Premiers of Ontario 1934-57 and Ministry as at Mar. 31, 1957

Legislatures 1934-57¹

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 19, 1934	19th.....	3	Feb. 20, 1935	Apr. 9, 1936
Oct. 6, 1937	20th.....	8	Dec. 1, 1937	June 30, 1943
Aug. 4, 1943	21st.....	2	Feb. 22, 1944	Mar. 24, 1945
June 4, 1945	22nd.....	4	July 16, 1945	Apr. 27, 1948
June 7, 1948	23rd.....	4	Feb. 10, 1949	Oct. 6, 1951
Nov. 22, 1951	24th.....	5	Feb. 21, 1952	May 2, 1955
June 9, 1955	25th.....	2	Sept. 8, 1955	

¹ The Ministries from 1934-57 were: 11th Ministry sworn in July 10, 1934 under the leadership of Hon. M. F. Hepburn; 12th Ministry sworn in Oct. 21, 1942 under the leadership of Hon. G. D. Conant; 13th Ministry sworn in May 18, 1943 under the leadership of Hon. H. C. Nixon; 14th Ministry sworn in Aug. 17, 1943 under the leadership of Hon. George A. Drew; 15th Ministry sworn in Oct. 10, 1948 under the leadership of Hon. Thomas L. Kennedy; 16th Ministry sworn in May 4, 1949 under the leadership of Hon. Leslie M. Frost. ² Life of Legislature not expired at Mar. 31, 1957.

Sixteenth Ministry

(Party standing at latest General Election, June 9, 1955: 84 Progressive Conservatives, 11 Liberals and 3 Co-operative Commonwealth Federation.)

NOTE.—See headnote to Table 15.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and President of the Council.....	Hon. LESLIE M. FROST.....	Aug. 17, 1943	May 4, 1949
Treasurer.....	Hon. DANA PORTER.....	May 8, 1944	Aug. 17, 1955
Secretary and Registrar.....	Hon. GEORGE H. DUNBAR.....	Aug. 17, 1943	Aug. 17, 1955
Minister of Labour.....	Hon. CHARLES DALEY.....	Aug. 17, 1943	Aug. 17, 1943
Minister of Agriculture.....	Hon. WILLIAM A. GOODFELLOW.....	Jan. 7, 1946	Aug. 1, 1956
Minister of Public Works.....	Hon. WILLIAM GRIESINGER.....	Apr. 15, 1946	Jan. 20, 1953
Minister without Portfolio.....	Hon. HAROLD R. SCOTT.....	Nov. 28, 1946	June 3, 1952
Minister of Public Welfare.....	Hon. LOUIS P. CECILE.....	Sept. 17, 1948	Aug. 17, 1955
Minister of Health.....	Hon. MACKINNON PHILLIPS.....	Aug. 8, 1950	Aug. 8, 1950
Minister of Reform Institutions.....	Hon. JOHN W. FOOTE.....	Nov. 16, 1950	Nov. 16, 1950
Minister of Education.....	Hon. WILLIAM J. DUNLOP.....	Oct. 2, 1951	Oct. 2, 1951
Minister of Mines.....	Hon. PHILIP T. KELLY.....	June 3, 1952	June 3, 1952
Minister of Municipal Affairs.....	Hon. WM. K. WARRENDER.....	Jan. 20, 1953	Nov. 1, 1956
Minister of Lands and Forests.....	Hon. CLARE E. MAPLEDORAM.....	July 7, 1954	July 7, 1954
Minister of Highways.....	Hon. JAMES N. ALLAN.....	Jan. 5, 1955	Jan. 5, 1955
Minister of Planning and Development.....	Hon. WILLIAM M. NICKLE.....	Jan. 20, 1955	Aug. 17, 1955
Attorney-General.....	Hon. A. KELSO ROBERTS.....	Aug. 17, 1955	Aug. 17, 1955
Minister of Travel and Publicity.....	Hon. BRYAN L. CATHCART.....	Aug. 17, 1955	Aug. 17, 1955
Chairman, Hydro-Electric Power Commission.....	Hon. T. RAY CONNELL.....	Nov. 1, 1956	Nov. 1, 1956

Subsection 7.—Manitoba

Besides a Lieutenant-Governor, Manitoba has an Executive Council composed of 10 members and a Legislative Assembly of 57 members elected for a statutory term of five years. The Honourable John Stewart McDiarmid, Lieutenant-Governor of the Province at Mar. 31, 1957, was commissioned to office Aug. 1, 1953. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 94.

The Premier of the Province is paid a salary of \$10,000 per annum and each of the other Members of the Cabinet \$8,000. Members of the Legislature are each paid an indemnity of \$2,000 and an expense allowance of \$1,000. The Leader of the Opposition is paid an additional amount of \$2,500 and the Speaker of the Legislature an additional amount of \$2,500.

20.—Legislatures and Premiers of Manitoba 1932-57 and Ministry as at Mar. 31, 1957
Legislatures 1932-57¹

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 16, 1932	19th.....	4	Feb. 14, 1933	June 12, 1936
July 27, 1936	20th.....	5	Feb. 18, 1937	Mar. 13, 1941
Apr. 22, 1941	21st.....	5	Dec. 9, 1941	Sept. 8, 1945
Oct. 15, 1945	22nd.....	4	Feb. 19, 1946	Sept. 29, 1949
Nov. 10, 1949	23rd.....	7	Feb. 14, 1950	Apr. 23, 1953
June 8, 1953	24th.....	2	Feb. 2, 1954	2

¹ The Ministries from 1932-57 were: 12th Ministry sworn in Aug. 8, 1922 under the leadership of Hon. J. Bracken; 13th Ministry sworn in Jan. 14, 1943 under the leadership of Hon. Stuart S. Garson; 14th Ministry sworn in Nov. 13, 1948 under the leadership of Hon. D. L. Campbell.

² Life of Legislature not expired at Mar. 31, 1957.

Fourteenth Ministry

(Party standing at latest General Election, June 8, 1953: 32 Liberal Progressives, 3 Independent Liberal Progressives, 12 Progressive Conservatives, 5 Co-operative Commonwealth Federation, 1 Labour Progressive, 2 Social Credit, 2 Independents.)

NOTE.—See headnote to Table 15.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council and Minister of Dominion-Provincial Relations	Hon. DOUGLAS L. CAMPBELL.....	Sept. 21, 1936	{ Nov. 13, 1948 Dec. 14, 1948
Attorney-General.....	Hon. MICHAEL N. HRYHORCZUK.....	Jan. 25, 1955	Jan. 25, 1955
Minister of Public Works.....	Hon. RONALD D. ROBERTSON.....	Nov. 7, 1952	July 18, 1956
Provincial Treasurer and Minister of Labour.....	Hon. CHARLES E. GREENLAY.....	Feb. 15, 1946	{ Dec. 14, 1948 July 18, 1956
Minister of Health and Public Welfare.....	Hon. ROBERT W. BEND.....	Jan. 25, 1955	Jan. 25, 1955
Minister of Education.....	Hon. WALLACE C. MILLER.....	Feb. 15, 1946	Aug. 16, 1950
Minister of Municipal Affairs and Provincial Secretary.....	Hon. EDMOND PREFONTAINE.....	Dec. 1, 1951	{ Dec. 1, 1951 Sept. 4, 1953
Minister of Industry and Commerce.....	Hon. FRANCIS L. JOBIN.....	July 18, 1956	July 18, 1956
Minister of Agriculture and Immigration and Minister of Public Utilities.....	Hon. CHARLES L. SHUTTLEWORTH.....	Sept. 4, 1953	{ Sept. 4, 1953 July 18, 1956
Minister of Mines and Natural Resources....	Hon. FRANCIS C. BELL.....	Dec. 14, 1948	July 18, 1956

Subsection 8.—Saskatchewan

The Government of the Province of Saskatchewan consists of a Lieutenant-Governor, an Executive Council and a Legislative Assembly. The Honourable W. J. Patterson, Lieutenant-Governor at Apr. 1, 1957, was commissioned to office July 4, 1951. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 95.

The statutory number of members of the Legislative Assembly is 53, elected for a maximum term of five years.

As of Apr. 1, 1954, the Premier receives \$8,500 and each Cabinet Minister \$7,000 annually in addition to the sessional indemnity. The Leader of the Opposition receives \$4,000. As of 1957 the Speaker and Deputy Speaker receive \$2,500 and \$1,500 respectively. The sessional indemnity of a Member of the Legislature is \$2,400 together with an expense allowance of \$1,200. Members for the three northern-most constituencies of Cumberland, Athabasca and Meadow Lake each receive a \$2,750 sessional indemnity and a \$1,350 expense allowance.

21.—Legislatures and Premiers of Saskatchewan 1934-57 and Ministry as at Apr. 1, 1957**Legislatures 1934-57¹**

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 19, 1934	8th.....	4	Nov. 15, 1934	May 14, 1938
June 8, 1938	9th.....	6	Jan. 19, 1939	May 10, 1944
June 15, 1944	10th.....	5	Oct. 19, 1944	May 19, 1948
June 24, 1948	11th.....	5	Feb. 10, 1949	May 7, 1952
June 11, 1952	12th.....	4	Feb. 12, 1953	Apr. 25, 1956
June 20, 1956	13th.....	2	Feb. 14, 1957	2

¹ The Ministries from 1934-57 were: 6th Ministry sworn in July 19, 1934 under the leadership of Hon. J. G. Gardiner; 7th Ministry sworn in Nov. 1, 1935 under the leadership of Hon. W. J. Patterson; 8th Ministry sworn in July 10, 1944 under the leadership of Hon. T. C. Douglas.

² Life of Legislature not expired at Apr. 1, 1957.

Eighth Ministry

(Party standing at latest General Election, June 20, 1956: 36 Co-operative Commonwealth Federation, 14 Liberals and 3 Social Credit.)

NOTE.—See headnote to Table 15.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council and Minister of Co-operation and Co-operative Development.....	Hon. T. C. DOUGLAS.....	July 10, 1944	July 10, 1944 (Nov. 14, 1949)
Provincial Treasurer.....	Hon. C. M. FINES.....	July 10, 1944	July 10, 1944
Minister of Mineral Resources.....	Hon. J. H. BROCKELBANK.....	July 10, 1944	Apr. 1, 1953
Minister of Highways and Transportation.....	Hon. J. T. DOUGLAS.....	July 10, 1944	July 10, 1944
Minister of Education.....	Hon. W. S. LLOYD.....	July 10, 1944	July 10, 1944
Minister of Municipal Affairs.....	Hon. L. F. MCINTOSH.....	July 10, 1944	Aug. 4, 1948
Minister of Labour and Minister of Telephones.....	Hon. C. C. WILLIAMS.....	July 10, 1944	July 10, 1944 (July 27, 1956)
Minister of Agriculture.....	Hon. I. C. NOLLET.....	Feb. 26, 1945	Feb. 26, 1945
Minister of Social Welfare and Rehabilitation.....	Hon. T. J. BENTLEY.....	Nov. 14, 1949	July 27, 1956
Minister of Natural Resources.....	Hon. A. G. KUSIAK.....	Oct. 24, 1952	July 27, 1956
Attorney General.....	Hon. R. E. WALKER.....	July 27, 1956	July 27, 1956
Provincial Secretary and Minister of Travel and Information.....	Hon. R. BROWN.....	July 27, 1956	July 27, 1956 (Apr. 1, 1957)
Minister of Public Health.....	Hon. J. W. ERB.....	July 27, 1956	July 27, 1956
Minister of Public Works.....	Hon. C. G. WILLIS.....	Aug. 31, 1956	Aug. 31, 1956
Minister without Portfolio.....	Hon. J. H. STURDY.....	July 10, 1944	July 27, 1956

Subsection 9.—Alberta

The Government of the Province of Alberta is composed of the Lieutenant-Governor, the Executive Council and the Legislative Assembly. The Honourable Dr. John J. Bowlen, Lieutenant-Governor at Mar. 31, 1957, was commissioned to office Feb. 1, 1950. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 96.

There are 61 members of the Legislative Assembly who are elected for a maximum period of five years.

The salary of the Premier is \$11,000 and of a Cabinet Minister \$8,500. A special allowance of \$2,500 is paid to the Leader of the Opposition. The sessional indemnity for each Member of the Legislative Assembly is \$2,400 plus an expense allowance of \$1,200.

22.—Legislatures and Premiers of Alberta 1935-57 and Ministry as at Mar. 31, 1957**Legislatures 1935-57¹**

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Aug. 22, 1935	8th.....	9	Feb. 6, 1936	Feb. 16, 1940
Mar. 21, 1940	9th.....	4	Feb. 20, 1941	July 7, 1944
Aug. 8, 1944	10th.....	5	Feb. 22, 1945	July 16, 1948
Aug. 17, 1948	11th.....	5	Feb. 17, 1949	June 28, 1952
Aug. 5, 1952	12th.....	3	Feb. 19, 1953	May 12, 1955
June 29, 1955	13th.....	2	Aug. 17, 1955	2

¹ The Ministries from 1935-57 were: 6th Ministry sworn in July 10, 1934 under the leadership of Hon. R. G. Reid; 7th Ministry sworn in Sept. 3, 1935 under the leadership of Hon. Wm. Aberhart; 8th Ministry sworn in May 31, 1943 under the leadership of Hon. Ernest C. Manning.

² Life of Legislature not expired at Mar. 31, 1957.

Eighth Ministry

(Party standing at latest General Election June 29, 1955: 37 Social Credit, 15 Liberals, 3 Progressive Conservatives, 2 Co-operative Commonwealth Federation, 1 Liberal Conservative, 1 Coalition, 1 Independent Social Credit, 1 Independent.)

NOTE.—See headnote to Table 15.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council, Minister of Mines and Minerals, and Attorney General	Hon. ERNEST C. MANNING.....	Sept. 3, 1935	May 31, 1943 Sept. 16, 1952 Aug. 2, 1955
Minister of Education.....	Hon. ANDERS O. AALBORG.....	Sept. 9, 1952	Sept. 9, 1952
Minister of Lands and Forests.....	Hon. N. A. WILLMORE.....	Nov. 10, 1953	Aug. 2, 1955
Minister of Public Works.....	Hon. JAMES HARTLEY.....	Aug. 2, 1955	Aug. 2, 1955
Minister of Health.....	Hon. W. W. CROSS.....	Sept. 3, 1935	Jan. 5, 1954
Minister of Public Welfare.....	Hon. R. D. JORGENSEN.....	Jan. 5, 1954	Jan. 5, 1954
Minister of Economic Affairs.....	Hon. A. R. PATRICK.....	Aug. 2, 1955	Aug. 2, 1955
Minister of Municipal Affairs and Provincial Secretary.....	Hon. ALFRED J. HOOKE.....	Apr. 20, 1945	Aug. 2, 1955
Minister of Agriculture.....	Hon. LEONARD C. HALMRAST.....	Jan. 3, 1953	Jan. 5, 1954
Minister of Industries and Labour.....	Hon. R. REIERSON.....	Aug. 2, 1955	Aug. 2, 1955
Minister of Telephones and Highways.....	Hon. GORDON E. TAYLOR.....	Dec. 27, 1950	Dec. 27, 1950 May 1, 1951
Provincial Treasurer.....	Hon. E. W. HINMAN.....	Dec. 23, 1954	Aug. 2, 1955
Minister without Portfolio.....	Hon. F. C. COLBORNE.....	Aug. 2, 1955	Aug. 2, 1955

Subsection 10.—British Columbia

The Government of British Columbia has a Lieutenant-Governor, an Executive Council and a Legislative Assembly. The Honourable Frank Mackenzie Ross, C.M.G., M.C., LL.D., Lieutenant-Governor of the Province at Mar. 31, 1957, was commissioned to office Oct. 3, 1955. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 98.

The Legislative Assembly, elected for a statutory term of five years, has 52 members.

Each Member of the Executive Council and the Legislative Assembly receives a sessional allowance of \$3,400 and \$1,000 for expenses. There is also paid to each Member a living allowance of \$15 for each day's attendance at the session and for each Saturday, Sunday or holiday that intervenes between two sittings of the House; the allowance of \$15 in any session is not paid in respect of more than 40 days. Each Member also receives an allowance of 25 cents per mile of the distance between his place of residence and the city of Victoria, reckoning such distance, going and coming, according to the nearest

mail route. In addition, the Premier receives a salary of \$15,000 and each Member of the Executive Council \$12,500. The Leader of the Opposition has a special allowance of \$3,500 for expenses and the Speaker and Deputy Speaker receive a special allowance of \$3,500 and \$1,000 respectively.

23.—Legislatures and Premiers of British Columbia 1933-57 and Ministry as at Mar. 31, 1957

Legislatures 1933-57¹

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Nov. 2, 1933 ²	18th.....	4	Feb. 20, 1934	Apr. 15, 1937
June 1, 1937	19th.....	5	Oct. 26, 1937	July 22, 1941
Oct. 21, 1941	20th.....	4	Dec. 4, 1941	Aug. 31, 1945
Oct. 25, 1945	21st.....	5	Feb. 21, 1946	Apr. 16, 1949
June 15, 1949	22nd.....	4	Feb. 14, 1950	Apr. 10, 1952
June 12, 1952	23rd.....	1	Feb. 3, 1953	Mar. 27, 1953
June 9, 1953	24th.....	4	Sept. 15, 1953	Aug. 13, 1956
Sept. 19, 1956	25th.....	3	Feb. 7, 1957	³

¹ The Ministries from 1933-57 were: 22nd Ministry sworn in Nov. 15, 1933 under the leadership of Hon. T. D. Pattullo; 23rd Ministry sworn in Dec. 9, 1941 under the leadership of Hon. John Hart; 24th Ministry sworn in Dec. 29, 1947 under the leadership of Hon. B. I. Johnson; 25th Ministry sworn in Aug. 1, 1952 under the leadership of Hon. W. A. C. Bennett. ² Owing to the death of a candidate, polling day was delayed in the Electoral Districts of Vancouver Centre and Victoria City until Nov. 27, 1933. ³ Life of Legislature not expired at Mar. 31, 1957.

Twenty-Fifth Ministry

(Party standing at latest General Election, Sept. 19, 1956: 39 Social Credit, 10 Co-operative Commonwealth Federation, 2 Liberals, 1 Labour.)

NOTE.—See headnote to Table 15.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council, Minister of Finance, and Minister of Agriculture....	HON. WILLIAM ANDREW CECIL BENNETT.....	Aug. 1, 1952	Aug. 1, 1952
Provincial Secretary and Minister of Municipal Affairs.....	HON. WESLEY DREWETT BLACK...	Aug. 1, 1952	Aug. 1, 1952
Attorney-General and Minister of Industrial Development, Trade and Commerce.....	HON. ROBERT WILLIAM BONNER...	Aug. 1, 1952	Aug. 1, 1952
Minister of Lands and Forests.....	HON. RAY GILLIS WILLISTON.....	Apr. 14, 1954	Feb. 28, 1956
Minister of Mines.....	HON. WILLIAM KENNETH KIERNAN	Aug. 1, 1952	Feb. 28, 1956
Minister of Highways.....	HON. PHILIP ARTHUR GAGLARDI...	Aug. 1, 1952	Mar. 15, 1955
Minister of Labour and Minister of Railways.	HON. LYLE WICKES.....	Aug. 1, 1952	Aug. 1, 1952
Minister of Education.....	HON. LESLIE RAYMOND PETERSON.	Sept. 27, 1956	Sept. 27, 1956
Minister of Health and Welfare.....	HON. ERIC CHARLES FITZGERALD MARTIN.....	Aug. 1, 1952	Aug. 1, 1952
Minister of Public Works.....	HON. WILLIAM NEELANDS CHANT...	Mar. 15, 1955	Mar. 15, 1955
Minister of Recreation and Conservation....	HON. EARLE CATHERS WESTWOOD	Sept. 27, 1956	Mar. 28, 1957

Subsection 11.—Yukon and Northwest Territories

Yukon Territory.—The Yukon was created a separate Territory in June 1898. Provision is made for a local Government composed of a Chief Executive, styled Commissioner, and an elective Legislative Council of five members with a three year tenure of office. The Commissioner administers the Government under instructions from the Governor in Council or the Minister of Northern Affairs and National Resources. The Commissioner in Council has power to make ordinances dealing with the imposition of local taxes, sale of liquor, preservation of game, establishment of territorial offices, maintenance of prisons and municipal institutions, issue of licences, incorporation of companies, solemnization of marriage, property and civil rights, administration of justice and generally all matters of a local nature in the Territory. The seat of local government is at Whitehorse, Yukon Territory.

TERRITORIAL COUNCIL

(Five members elected 1955, for three years)

Dawson.....	V. C. MELLOR	Whitehorse East.....	J. L. PHELPS
Mayo.....	D. C. McGEACHY	Whitehorse West.....	R. HULLAND
	Carmacks.....	A. R. HAYES	

TERRITORIAL OFFICIALS

(AS AT MAY 31, 1957)

Commissioner (Whitehorse).....	F. H. COLLINS
Superintendent of Works and Buildings.....	K. BAKER
Registrar of Vital Statistics.....	H. TAYLOR
Legal Adviser.....	F. G. SMITH

The Director of the Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, is directly responsible for the general administration of the Territory under the Yukon Act (R.S.C. 1952, c. 298) and that Department has three lands and mining officials stationed in the Territory. Other Departments of the Federal Government including Justice, National Revenue, Transport, Post Office, etc., also maintain officials in the Yukon Territory.*

Northwest Territories.—As reconstituted on Sept. 1, 1905, these comprise:—

- (1) all that part of Canada north of the Sixtieth Parallel of North Latitude, except the portions thereof within the Yukon Territory and the Provinces of Quebec and Newfoundland, and
- (2) the islands in Hudson Bay, James Bay and Ungava Bay, except those islands within the Provinces of Manitoba, Ontario and Quebec.

The Northwest Territories Act (R.S.C. 1952, c. 331) provides for the appointment of a Commissioner to administer the government of the Territories under instructions given from time to time by the Governor in Council or the Minister of Northern Affairs and National Resources. As a matter of practice the appointment is held by the Deputy Minister of Northern Affairs and National Resources. For administrative purposes the Territories are divided into the provisional districts of Mackenzie, Keewatin and Franklin (Order in Council dated Mar. 16, 1918). The Northwest Territories Act, as amended, also provides for a Council of nine members, four of whom are elected in the Mackenzie District and five of whom are appointed by the Governor in Council. The Commissioner in Council has legislative powers respecting such matters as direct taxation, establishment and tenure of territorial offices, municipal institutions, controverted elections, licences, incorporation of companies, property and civil rights, administration of justice, game, education, hospitals and generally all matters of a merely local or private nature. The Council meets once each year in the Territories and at least once each year in Ottawa which is the Seat of Government. The resources, except game, remain under the control of the Federal Government. The administration of legislation passed by the Commissioner in Council and the management of resources under federal legislation are carried on by the Northern Administration and Lands Branch of the Department of Northern Affairs and National Resources. Administrative offices are located in the Territories at Fort Smith, Yellowknife, Hay River and Aklavik.

COUNCIL OF THE NORTHWEST TERRITORIES

(AS AT AUG. 19, 1957)

Commissioner..... R. G. ROBERTSON

Deputy Commissioner..... W. G. BROWN

Members of the Council—

Appointed..... LOUIS DE LA C. AUDETTE, C. M. DRURY, JEAN BOUCHER,
W. G. BROWN, L. H. NICHOLSON

Elected..... K. LANG, J. W. GOODALL, ROBERT C. PORRITT, JOHN PARKER

Officers of the Council—

Secretary..... R. A. BISHOP

Legal Adviser..... WM. NASON

* Further information on officials of various Federal Government Departments serving Yukon Territory may be obtained from the Director, Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, Ottawa.

Section 3.—Municipal Government*

Most Canadians are served by municipal government, although, paradoxically, a great part of the country does not have municipal government. The populated strip running through the Maritime Provinces, along the St. Lawrence River and the eastern Great Lakes, and from Lake Superior to the Pacific is largely municipally organized, but vast areas of the Provinces of Newfoundland, Quebec and those of western Canada, together with the Territories, are so thinly populated that only a few isolated municipalities have been set up.

Except in the Territories, municipal government is organized and functions under provincial jurisdiction. While there are basic similarities in the municipalities as between provinces, there are infinite variations in the detail of legislation governing incorporation, power and functions, in methods of control and assistance, and in local administrative practices.

For municipalities the postwar period has been changeful. Reorganization has been a live topic, and to a degree has come about in some provinces. Ontario has formed a Metropolitan Municipality in the Toronto area. Alberta has realigned the boundaries of its rural municipalities. Like actions are being debated in other provinces. A whole system of local government has grown up in Newfoundland. Several legislative Acts governing municipalities have been substantially rewritten. The Federal Government and some provincial governments have instituted plans for payments in lieu of taxes on Crown property. Serious thought has been given to assessment methods, their improvement and standardization. Financial reporting is gradually being made comparable. Provincial assistance has been revised and increased. And as yet there appears no slackening in the pressure to change the municipal systems, though not all are in accord on degree or on direction, or on the need for any basic change.

In their operating programs many urban municipalities are faced with a great demand for facilities and services as a result of increased need for modern amenities, for better roads and streets and more services, and also as a result of their rapid and sometimes almost explosive growth. The resulting increase in taxation, borrowing and provincial aid is causing much of the pressure for organizational and financial changes, even of a constitutional nature.

An outline of municipal organization at the end of 1956 in each of the provinces of Canada is given in the following paragraphs.†

Newfoundland.—Newfoundland has two cities, St. John's and Corner Brook, the latter becoming incorporated on Jan. 1, 1956. The remainder of the population is dispersed in small settlements along the coast and only since 1937 have a few of the larger of these been set up individually as towns with local councils or, where two or three are close together, as rural districts. These latter are not rural municipalities but merely towns consisting of two or more settlements. Local affairs in the remainder of the Province are administered by the Provincial Government. In 1949 the Local Government Act was passed to facilitate incorporations. There were 31 towns and four rural districts incorporated under the Act at the end of 1956 and 24 local government communities with lesser powers of government.

Prince Edward Island.—The Province has one city, Charlottetown, and seven towns, all incorporated by special Acts. They comprise less than one-half of one per cent of the area of the Island and only about a quarter of its population. The Village Service Act, 1951, provides for the incorporation of villages. The remaining area of the Province is not organized municipally, the three counties being provincial administrative units only.

Nova Scotia.—Municipal organization in Nova Scotia covers the whole of the Province. The two cities, Halifax and Sydney, operate under special charters and certain special legislation. Forty towns operate under the Town Incorporation Act but there are

* Prepared in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

† Municipalities are summarized by type of organization on p. 75.

no municipalities incorporated as villages. Cities and towns are independent of counties. The rural area is divided into 18 counties which, in themselves, do not represent units of local government. However 12 of these counties each comprise one municipality and the other six each comprise two municipalities, making a total of 24 rural municipalities.

New Brunswick.—The Province is divided into 15 counties which are incorporated municipalities and have direct powers of local self-government in the rural areas. In effect therefore they are rural municipalities. In most cases certain of their powers apply in both rural and urban municipalities. The five cities—Saint John, Fredericton, Moncton, Edmundston and Lancaster—have special charters, and the 20 towns operate under the Towns Incorporation Act. There are two villages and 56 local improvement district areas within the counties but outside the cities, towns and villages; these have been incorporated for the provision of limited municipal services.

Quebec.—Municipal divisions in Quebec embrace the more thickly settled areas comprising about one-third of the Province, the remainder being governed by the Province as 'territories'. The organized area is divided into 75 county municipalities, which are divided again into local municipalities under the Municipal Code and designated as village, township or parish municipalities or simply as municipalities. The counties as such have no direct powers of taxation. Funds to finance the services falling within their jurisdiction are provided by the municipalities forming part thereof. Parts of some counties are not yet organized into incorporated units of local government, being in outlying areas with little or no population. There are 336 villages and 1,129 townships and parishes. A small number of these are independent of the counties in which they are located. Of the 42 cities a few have special charters. The remainder along with the 149 towns are governed by the Cities and Towns Act and numerous special Acts.

Ontario.—Slightly more than one-tenth of the area of Ontario is municipally organized, the remainder being governed entirely by the Provincial Government. The older section of the Province is divided into 43 counties, five of which are united with others for administrative purposes. Although an incorporated municipality each county is comprised of the towns, villages and townships situated within its borders, which provide its revenue. The Municipality of Metropolitan Toronto encompasses one city, four towns, three villages and five townships. There are 29 cities, 155 towns, 156 villages, 572 townships and 22 improvement districts in the Province. Some of each are located in the northern districts which are not organized into counties.

Manitoba.—Only the southern and settled section of Manitoba comprising less than one-eighth of the area is organized for local self-government. As in the other three western provinces there is no county organization and all municipalities are independent except of provincial control. There are five cities, four with special charters and one governed by a number of special Acts. General Acts govern the 35 towns, 37 villages, 109 rural municipalities and four suburban municipalities. An Act of 1944 (amended January 1945) authorizes organization of local government districts in unorganized or in disorganized (formerly organized but later unorganized) territory, and 14 such districts have been set up.

Saskatchewan.—All municipalities in Saskatchewan derive their powers from general Acts that are designated with the name of the type of municipality. There are eight cities, 99 towns, 377 villages and 296 rural municipalities. The area so organized consists of most of the southern two-fifths of the Province—the remainder of this portion is administered for local purposes by the Province in unincorporated local improvement districts. The northern three-fifths is sparsely populated and without local government though some municipal services are provided by the Province through operation of the Northern Administrative Area.

Alberta.—In Alberta there are eight cities, 83 towns, 145 villages and 48 rural municipalities known as municipal districts. Included in the latter are seven county municipalities which are not counties as they exist in Ontario for example but are municipalities

where the council administers education and municipal hospitals. There are also some unincorporated improvement districts administered by the Province in less densely settled areas but only about one-fifth of the Province is organized.

British Columbia.—Less than 0.5 p.c. of the area of British Columbia is organized into municipalities. Additional small areas have sufficient population to require administration of local activities by the Provincial Government. There are 36 cities, 52 villages and 30 districts. The latter are chiefly rural municipalities except for those adjacent to the principal cities of Victoria and Vancouver, which are largely urban in character. It should be emphasized however that the application of the name "city" is somewhat different from the commonly accepted meaning in that several of them have populations of fewer than 1,000 and perhaps one-half or more would not normally be incorporated as cities in another province. Legislation of 1957 provides for incorporation of towns.

Yukon and Northwest Territories.—There are two cities and one town in the Yukon Territory and two local administrative districts in the Northwest Territories, all of which provide some municipal services to their local areas. These are not shown in Table 24.

24.—Municipalities, by Official Designation¹ and by Statistical Classification², by Province, Quebec as at Mar. 16, 1957 and All Others as at Dec. 31, 1956

Item	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
OFFICIAL DESIGNATION ¹											
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Urban municipalities.....	57	21	42	27	527	340	77	484	236	88	1,899
<i>Cities</i>	2	1	2	5	42	29	5	8	8	36	138
<i>Towns</i>	55 ³	7	40	20	149	155	35	99	83	...	643
<i>Villages</i>.....	...	13 ⁴	...	2	336	156	37	377	145	52	1,118
Rural municipalities ⁵	4	...	24	15	1,129	594 ⁶	113 ⁷	296 ⁸	48 ⁹	30	2,253
Ontario and Quebec counties	...	...	...	...	75	39 ¹⁰	...	...	...	...	114
Totals, Incorporated Municipalities	61	21	66	42¹¹	1,731	973	190	780	234	118	4,256
STATISTICAL CLASSIFICATION ²											
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Municipalities in Metropolitan Areas ¹²	2	...	3	5	76	41	14	...	10	19	170
<i>Urban</i>	2	...	2	3	57	23	6	...	6	7	106
<i>Rural</i>.....	...	...	1	2	19	18	8	...	4	12	64
Other urban municipalities..	55	21	40	24	470	317	71	484	230	81	1,793
Other rural municipalities...	4	...	23	13	1,110	576	105	296	44	18	2,189
<i>Semi-urban</i>.....	...	...	...	...	...	57 ¹³	...	...	...	...	57
<i>Other</i>	4	...	23	13	1,110	519	105	296	44	18	2,132
Ontario and Quebec counties	...	...	...	...	75	39	...	...	...	...	114
Totals, Incorporated Municipalities	61	21	66	42	1,731	973	190	780	234	118	4,256

¹ This section of the table groups the municipalities according to their official nomenclature, which is roughly indicative of size and nature (see footnote 5). ² This section of the table groups the municipalities under the classification devised by the Dominion Provincial Conferences on Municipal Statistics, the classification being designed to bring municipalities into comparable groups for statistical presentation.

³ Includes 24 Local Government Communities. ⁴ See text on p. 73. ⁵ Rural municipalities are designated by different names in the different provinces. ⁶ Includes 22 improvement districts. ⁷ Includes 4 units of self-government known as "Suburban Municipalities". Does not include local government districts. ⁸ Excludes 12 improvement districts. ⁹ Includes 7 county municipalities. Excludes 50 improvement districts and 2 special areas. ¹⁰ Includes Municipality of Metropolitan Toronto. ¹¹ Excludes 56 local improvement districts. ¹² Municipalities shown wholly or partly in metropolitan areas by the 1956 Census of Canada, but does not include the Municipality of Metropolitan Toronto, which is shown with counties. ¹³ These are classed as suburban and semi-urban by provincial authorities.

Section 4.—Federal and Provincial Royal Commissions

Federal Royal Commissions.*—Royal Commissions established from June 1, 1955, to March 31, 1957, are reported here in continuation of those previously reported in the Year Books beginning with the 1940 edition at pp. 1108-1110.

<i>Nature of Commission</i>	<i>Commissioners</i>	<i>Date</i>
To review Canada's economic prospects†.	Walter Loekhart Gordon, Chairman Omer Lussier Albert Edward Grauer Andrew Stewart Raymond Gushue	June 17, 1955
To inquire into Canadian television and radio broadcasting‡.	Robert MacLaren Fowler, Chairman Edmond Turcotte James Stewart	Dec. 2, 1955
To review the financial position of Newfoundland as required under the Terms of Union (13 Geo. VI, c. 1, s. 29).	Hon. John Bellitt McNair, Chairman Hon. Albert Walsh John James Deutsch	Feb. 21, 1957

Provincial Royal Commissions.—The following list is in continuation of those appearing in previous Year Books beginning with the 1948-49 edition.

<i>Province and Nature of Commission</i>	<i>Commissioner or Chairman</i>	<i>Date</i>
NEWFOUNDLAND		
Commission of Enquiry into the Incidence of the Local School Tax on the City of Corner Brook.	J. Abbot Beaton.	May 3, 1956
Commission of Enquiry into the Boys Home and Training School at Whitbourne.	Claude Sheppard.	Mar. 27, 1956
Commission of Enquiry into Economic Conditions on the South Coast.	John T. Cheesman.	June 12, 1956
NOVA SCOTIA		
Commission on Hurricane Edna Damage.	His Hon. Judge A. H. McKinnon.	Sept. 22, 1954
Commission on Cape Breton Hospital.	His Hon. Judge V. J. Pottier.	Feb. 13, 1956
Commission on Automobile Insurance.	Dean Horace B. Read.	July 25, 1956
Commission on Farm Credit.	Hon. C. G. Hawkins.	Aug. 29, 1956
Commission on the Springhill Mine Disaster.	Donald McInnes.	Jan. 10, 1957
Commission on the Annapolis Valley Apple Industry.	John A. Walker.	Feb. 8, 1957
Commission on the Workmen's Compensation Act.	His Hon. Judge A. H. McKinnon.	Mar. 5, 1957
QUEBEC		
Committee for the Study of Certain Provincial Road Problems.	Ernest Gohier.	Feb. 10, 1955
Committee on Water Pollution Problems.	Hon. Justice Aimé Marchand.	Dec. 15, 1955
MANITOBA		
Commission to inquire into the cost of supplying hospital care and treatment to indigent persons and into the payment of charges therefor.	F. Walter Crawford.	June 2, 1955
The Greater Winnipeg Investigating Commission.	J. L. Bodie.	Sept. 6, 1955

* Commissions constituted under Part I of the Federal Inquiries Act.

† Preliminary report dated December 1956.

‡ Report dated Mar. 15, 1957.

<u>Province and Nature of Commission</u>	<u>Commissioner or Chairman</u>	<u>Date</u>
MANTOBA—concluded		
Building Damage Appraisal Commission (1955)—Red River Watershed and Rural Municipalities of Ritchot and Taché.	Lawrence Smith.....	Jan. 9, 1956
Building Damage Appraisal Commission (1955)—in Rural Municipalities of Ochre River, Ste. Rose and McCreary.	Lawrence Smith.....	May 29, 1956
Royal Commission on Flood-Cost Benefit....	Henry William Manning.	Dec. 18, 1956
ALBERTA		
The Metropolitan Planning Commission to inquire into the administration and financing of school and municipal services in the cities of Edmonton, Calgary and surrounding areas.	Hon. Justice Hugh John Macdonald*	July 19, 1955
Commission to inquire into certain charges, allegations and reports relating to the conduct of the business of Government in the Province of Alberta made in speeches, articles and editorials and in reports of meetings, statements and addresses published in the newspapers and also on radio and television in various parts of Alberta.	—	Sept. 2, 1955
BRITISH COLUMBIA		
Commission to inquire into allegations suggestive of corruption in the Police Department of Vancouver, and into the administration of the Police Department of Vancouver, and of laxity in the enforcement of the Criminal Code of Canada by that Department, and specifically determine whether such allegations or any part of them are true in whole or in part and as to whether the Criminal Code of Canada is being properly and efficiently administered by the Police Department of the City of Vancouver.	Reginald Hibbert Tupper.....	June 24, 1955
Commission to inquire into the problems of production, packing, storage, processing and marketing and distribution of the products of the tree fruit industry of British Columbia and particularly into (a) what constitutes an economic unit of production, (b) the economics of packing, storage and processing facilities, procedures and techniques employed in the Province, (c) the factors involved in the marketing of tree fruit products.	Earl D. MacPhee.....	Dec. 21, 1956

PART III.—ADMINISTRATIVE FUNCTIONS OF THE FEDERAL GOVERNMENT†

A special article presenting information on the administration and control of the financial affairs of the Federal Government appears in the 1956 Year Book at pp. 101-107.

Section 1.—Departments, Boards, Commissions, etc.

The following paragraphs indicate the functions of the various departments of government and the special boards and commissions in connection with the work of government.

Though it is not possible, owing to the limitations of space, to enumerate in this Section the details of each service or the divisions or sections of all the departments, the main branches are given along with those services that differ in some quality from the larger

* Hon. Justice Hugh Macdonald resigned the chairmanship of the Commission and was replaced on Feb. 7, 1956 by James C. Mahaffy.

† As at May 31, 1957.

class of subjects handled by a department. The work of many of these departments and boards is given in detail in later Chapters of this volume. The Index will be useful in locating required information.

Department of Agriculture.—This Department was established in 1867 (30 Vict., c. 53) and conducts the concerns of all phases of agriculture. Research and experimentation are carried out by the Science Service and the Experimental Farms Service; the maintenance of standards and protection of products by the Production Service and Marketing Service; reclamation and development by the Prairie Farm Rehabilitation Administration and the Maritime Marshland Rehabilitation Administration; security and price stability policies are administered under the Prairie Farm Assistance Administration and the Agricultural Prices Support Board. The results of work in these various fields and general information on the policies of the Department is made available to the public through the Information Service.

Auditor General's Office.—This Office originated in 1878 (41 Vict., c. 7) and currently functions under the Financial Administration Act (R.S.C. 1952, c. 116). The Auditor General is responsible for examining accounts relating to the Consolidated Revenue Fund and to public property, and for reporting annually to the House of Commons the results of his examinations. He also audits the accounts of various Crown corporations and other instrumentalities.

Board of Grain Commissioners.—Constituted in 1912 under the Canada Grain Act, 1912—now Canada Grain Act, 1930 (R.S.C. 1952, c. 25)—the Board of Grain Commissioners provides general supervision over grain handling in Canada, by licensing elevator operators, inspecting and weighing grain *en route* to and shipped from terminal elevators, and other services. The Board, comprising a Chief Commissioner and two Commissioners, has authority to inquire into any matter relating to the grading and weighing of grain, deductions for dockage or shrinkage, deterioration of any grain during storage or treatment, unfair or discriminatory operation of a grain elevator, etc. The Board publishes its regulations in the *Canada Gazette* and reports to Parliament through the Minister of Trade and Commerce.

Board of Transport Commissioners.—The powers of this Board, which was organized as the Board of Railway Commissioners in 1904, have been extended from time to time until today it has regulatory and judicial functions dealing with almost all aspects of railway activity including location, construction and operation of lines, rates and charges. It is also entrusted with the regulation of other transportation and communication agencies, including express companies, telegraph companies, telephone companies other than those provincially or municipally controlled, international bridges and tunnels, inland shipping and pipelines. The Board reports to Parliament through the Minister of Transport.

Canadian Government Specifications Board.—This is a co-operative body in which Government and industry participate on a voluntary basis. It was formed June 13, 1934, as the Canadian Government Purchasing Standards Committee, under the auspices of the National Research Council. It undertakes the preparation of specifications in commodity fields and for materials, processes and equipment in which government departments and agencies may be interested and arranges for testing and research work.

Chief Electoral Office.—This Office was established in 1920 under the provisions of the Dominion Elections Act, now the Canada Elections Act (R.S.C. 1952, c. 23), and amendments thereto, and is responsible for the conduct of all federal elections as well as the elections of members of the Northwest Territories Council. In addition it conducts any vote taken under the Canada Temperance Act. The Chief Electoral Officer reports to Parliament through the Secretary of State.

Department of Citizenship and Immigration.—This Department was constituted in December 1949 (R.S.C. 1952, c. 67) and came into existence on Jan. 18, 1950, under the Minister of Citizenship and Immigration. Most departmental work is carried on through four branches: The Canadian Citizenship Branch assists governmental and non-governmental agencies engaged or interested in facilitating the adjustment and integration of newcomers and in making Canadians conscious of their privileges and responsibilities as citizens. The Canadian Citizenship Registration Branch administers the Canadian Citizenship Act and is the custodian of all records under that Act and all Naturalization Acts previously in force. The Immigration Branch administers the Immigration Act and Regulations and is responsible for the selection, examination and movement of immigrants, the exclusion or deportation of undesirables and the settlement or establishment of immigrants in Canada. The activities of the Indian Affairs Branch include management of all Indian affairs. Its organization consists of a headquarters office at Ottawa, a regional supervisory staff, and 87 local agencies in the field.

The Minister of Citizenship and Immigration is responsible to Parliament for the National Film Board, the National Library, the Public Archives, and for the National Gallery of Canada which is governed by a Board of Trustees.

Civil Service Commission.—The Civil Service Commission of Canada dates from the Civil Service Act of 1908. Under this Act the Commission was given the responsibility of applying, wherever possible, the principle of appointment by merit in filling permanent positions within departmental headquarters positions at Ottawa, termed the 'inside service'.

The Civil Service Act 1918 extended the competitive system of appointments to cover the outside as well as the inside service and temporary as well as permanent appointments. It made the Commission responsible for establishing a system of organization and classification that would secure uniformity in the staffing of the various departments and in the salaries paid for work of equal levels of difficulty and responsibility.

The jurisdiction of the Commission now extends to all departments of the Government and to a large number of boards and commissions, exclusive of Crown corporations.

The Civil Service Commission, which reports to Parliament and makes recommendations to the Government through the Secretary of State, consists of three members, one of whom serves as Chairman. Each member of the Commission is appointed by the Governor in Council for a term of ten years and each has the rank and standing of a Deputy Minister. The Commission has a staff of approximately 620 persons located in the headquarters office at Ottawa and in district offices at St. John's, Nfld., Halifax, N.S., Moncton, N.B., Montreal, Que., Toronto, Ont., Winnipeg, Man., Regina, Sask., Edmonton, Alta., and Vancouver, B.C.

Department of Defence Production.—This Department was established on Apr. 1, 1951, under the provisions of the Defence Production Act (R.S.C. 1952, c. 62, as amended). Under this Act the Minister is given, with certain exceptions, authority to buy defence supplies and construct defence projects required by the Department of National Defence. The Minister may, if authorized by the Governor General in Council, undertake for an associated government anything he may undertake for the Canadian Government. In addition, all powers, duties and functions that theretofore were vested in the Minister of Trade and Commerce under any contract, agreement, lease or other writing entered into pursuant to the Department of Munitions and Supply Act, 1939, or the Defence Supplies Act, 1950, are vested in the Minister of Defence Production.

Broadly, the Department's functions are to procure military goods, to construct defence installations and to organize industry for defence as required on behalf of the Department of National Defence, other government departments, and associated governments; to promote the expansion of defence production facilities and the development of defence-supporting industries particularly of strategic resources important for the defence of Canada and its allies; and to ensure adequate supplies of essential materials and services for defence requirements. The main procurement units of the Department are six production branches—Aircraft, Ammunition, Electronics, Gun, Machine Tool and Shipbuilding—and a General Purchasing Branch. Major offices for foreign procurement are located at London, England, and Washington, U.S.A.; and the General Purchasing Branch has 14 district purchasing offices located throughout Canada for local or urgent procurement. In addition, there are various service branches which include Administration, Comptroller's, Economics and Statistics, Financial Adviser's, Industrial Security, Legal, and Secretary's.

The following Crown companies report to Parliament through the Minister of Defence Production: Canadian Arsenals Limited, Canadian Commercial Corporation, Crown Assets Disposal Corporation, Defence Construction (1951) Limited, and Polymer Corporation Limited.

Dominion Bureau of Statistics.—The Dominion Bureau of Statistics was set up by statute in 1918 as a central statistical department for Canada (8-9 Geo. V, c. 43). In 1948 this statute, which had been consolidated as the Statistics Act (R.S.C. 1927, c. 190), was repealed and replaced by the Statistics Act (R.S.C. 1952, c. 257); it was amended by 1-2 Eliz. II, c. 18, assented to Mar. 31, 1953.

The function of the Dominion Bureau of Statistics is to compile, analyse and publish statistical information relative to the commercial, industrial, financial, social and general condition of the people and to conduct a census of population and agriculture of Canada at ten-year intervals.

The Bureau is the principal publication agency of the Federal Government; the subjects of the reports cover all aspects of the national economy. The Bureau reports to Parliament through the Minister of Trade and Commerce.

Department of External Affairs.—This Department was established in 1909 by "An Act to create a Department of External Affairs" (R.S.C. 1952, c. 68). Its main function is the protection and advancement of Canadian interests abroad. The head of the Department of External Affairs is the Secretary of State for External Affairs. The senior permanent officer of the Department is the Under-Secretary (Deputy Minister) who is the chief adviser to the Secretary of State for External Affairs. He is assisted by a Deputy Under-Secretary and by three Assistant Under-Secretaries and a Legal Adviser and is advised by officers in charge of the various divisions, each responsible for a part of the work of the Department. The divisional heads are assisted by Foreign Service Officers, Administrative Officers and by an administrative staff. Officers serving abroad are formally designated as Ambassadors, Ministers, Counsellors, First, Second and Third Secretaries at diplomatic posts and as Consuls General, Consuls and Vice-Consuls at consular posts. Fifty-eight diplomatic and consular posts are maintained abroad.

The work of the Department at Ottawa is performed by 19 divisions, which can be grouped according to their functions into three categories—political, functional and administrative. There are five political divisions—American, Commonwealth, European, Middle Eastern and Far Eastern; ten functional divisions—Communications, Consular, Defence Liaison (1) and (2), Economic, Information, Legal, Historical Research and Reports, Protocol and United Nations; and four administrative divisions—Establishments and Organization, Finance, Personnel, and Supplies and Properties. There are also three smaller sections—Inspection Service, Political Co-ordination Section and the Press Office.

Department of Finance.—This Department, created on June 22, 1869, by an Act respecting the Department of Finance (32-33 Vict., c. 4), is under the authority of the Minister of Finance. The Department is responsible for the financial administration of Canada including raising the money required for the various governmental activities by way of taxation or borrowing. The Comptroller of the Treasury, an officer of the Department, is responsible for all Government disbursements.

The work of the Department is organized in seven principal Divisions: Administration, Financial Administration and Accounting Policy, Superannuation, Treasury Board, Taxation, Economic Policy, and International Economic Relations. The Royal Canadian Mint is a branch of the Department and the Inspector General of Banks is an officer of the Department.

The Tariff Board and the Canadian Farm Loan Board are responsible to Parliament through the Minister of Finance.

Department of Fisheries.—The Department of Fisheries was first organized under a Minister of Fisheries in 1930. Prior to that date the federal fisheries services were maintained by the former Department of Marine and Fisheries, established in 1868. The provinces, under various arrangements, have certain administrative responsibilities in the fisheries but the legislative authority for the regulations of coastal and freshwater fisheries is with the Federal Department of Fisheries.

The work of the Department includes: conservation and development of the fisheries through the enforcement of fishing regulations, the operation of fish culture establishments, management and improvement of spawning streams and control of predators; inspection of fish products for quality control and the encouragement of industrial development; promotion of the greatest utilization of fishery products and a proper public understanding of the resource and the industry. The Department administers the Fishermen's Indemnity Plan to assist fishermen in the event of loss or serious damage to their fishing vessels or lobster traps.

Agencies connected with the Department are the Fisheries Prices Support Board and the Fisheries Research Board of Canada. The Department is represented on these International Commissions: Pacific Salmon Fisheries, Pacific Halibut, the Northwest Atlantic Fisheries, North Pacific Fisheries, Whaling, and Great Lakes Fisheries, and participates in an international agreement controlling the take of Pribilof seals.

Fisheries Research Board.—The Fisheries Research Board operates under the Fisheries Research Board Act of 1937 (amended in 1947 and 1952-53). It has been active as a fisheries research body since 1898, first as Board of Management of the Canadian Marine Biological Station and later (1912) as the Biological Board of Canada.

The Board operates under the Minister of Fisheries and membership consists of a full-time Chairman and up to 18 members appointed by the Minister from among leading Canadian scientists and businessmen with a knowledge of fishery problems.

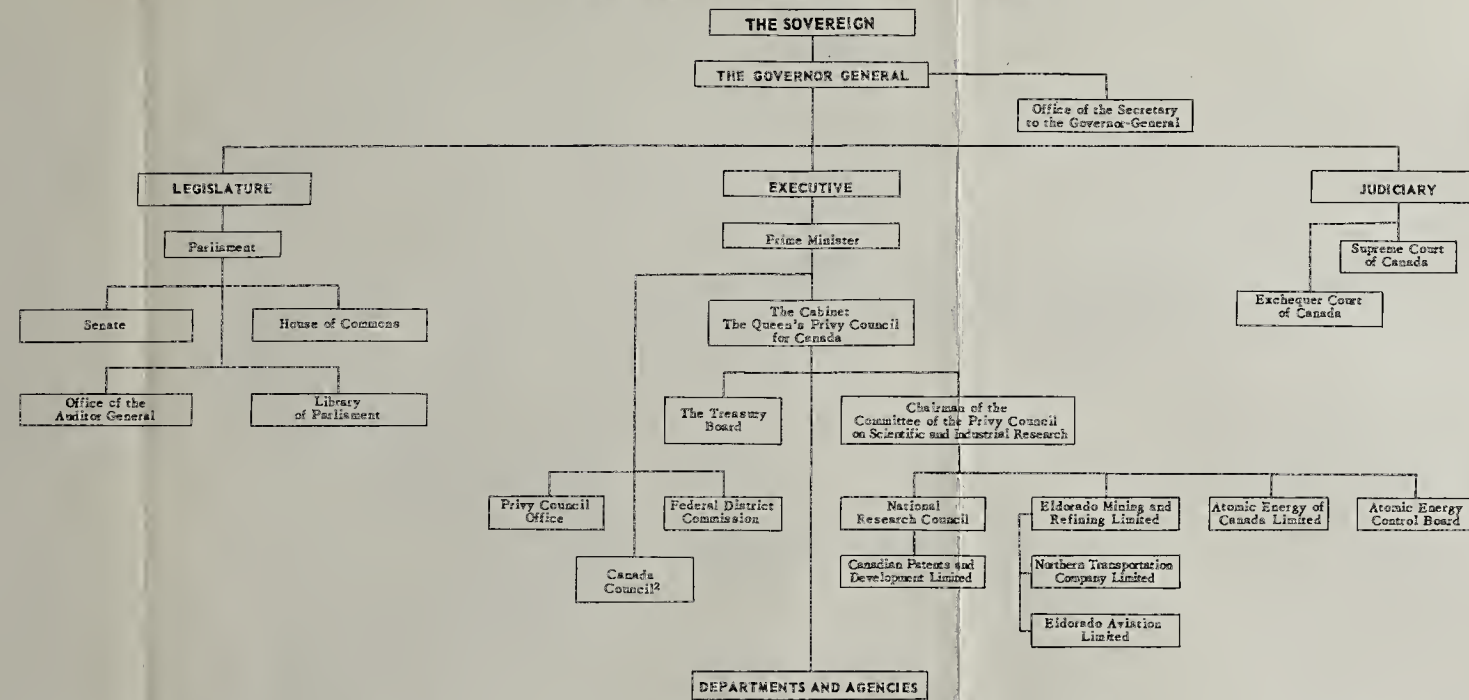
The Board operates five biological stations across Canada, four technological stations and two oceanographic groups. It serves as the scientific arm of the Department of Fisheries and its principal objective is to increase the scope and value of Canadian fisheries through scientific research.

Department of Insurance.—The Minister of Finance is responsible for the Department of Insurance which originated in 1875 as a branch of the Department of Finance but was constituted a separate Department in 1910. It is authorized and governed by the Department of Insurance Act (R.S.C. 1952, c. 70). Under the Superintendent of Insurance, the Department administers the statutes of Canada applicable to: insurance, trust and loan companies incorporated by the Parliament of Canada; provincially incorporated insurance companies registered with the Department; British and foreign insurance companies operating in Canada; small loans companies and money-lenders; and Civil Service insurance.

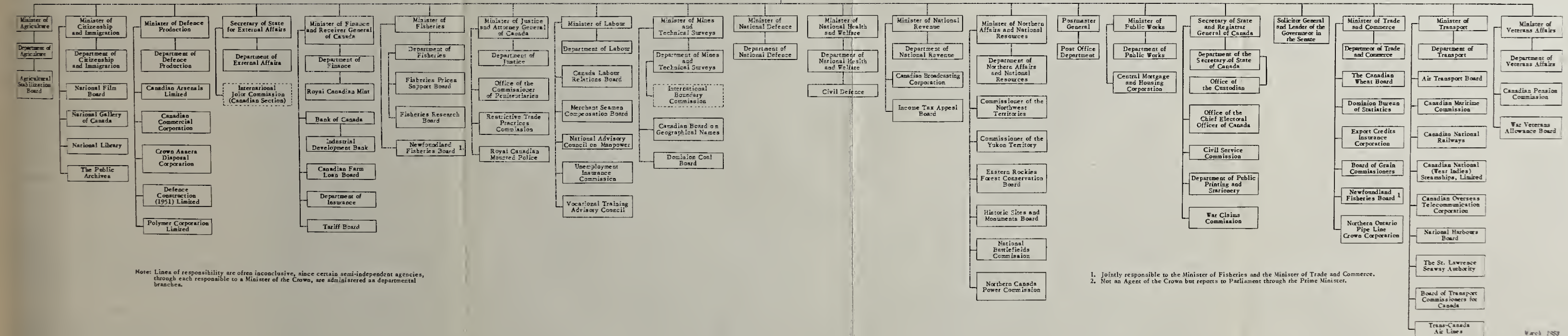
Under the relevant provincial statutes the Department examines provincial trust companies in the Provinces of Manitoba and New Brunswick and loan and trust companies in the Province of Nova Scotia.

International Joint Commission.—This Commission was established under a joint Canada-United States treaty, Jan. 11, 1909, ratified by Canada in 1911. The Commission, composed of six members (three appointed by the President of the United States and three by the Canadian Cabinet) is governed by five specific Articles of the Boundary Waters Treaty of 1909 which include the right of approval of all matters affecting the natural level or flow of boundary waters on either side of the International Boundary and the power to pass on all applications for works contemplated in waters flowing from or in boundary waters which would change the natural level.

THE GOVERNMENT OF CANADA



DEPARTMENTS AND AGENCIES



Note: Lines of responsibility are often inconclusive, since certain semi-independent agencies, through each responsible to a Minister of the Crown, are administered as departmental branches.

1. Jointly responsible to the Minister of Fisheries and the Minister of Trade and Commerce.
2. Not an Agent of the Crown but reports to Parliament through the Prime Minister.

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Problems arising from the common frontier are also referred to the Commission by either country for examination and report; in such cases, the Commission's decisions are in the nature of recommendations. The International Joint Commission has, however, judicial powers and can render decisions on problems or questions of difference between the two countries providing both consent to be bound by its judgment. These problems need not be connected with the common frontier. The Commission reports to Parliament through the Secretary of State for External Affairs.

Department of Justice.—This Department, established by 31 Vict., c. 39 (1868), now operates under authority of the Department of Justice Act (R.S.C. 1952, c. 71). It provides legal services to the Government and various government departments including preparing and settling government legislation, settling instruments issued under the Great Seal, regulating and conducting litigation for or against the Crown, superintending the acquisition of property and prosecutions under federal legislation other than the Criminal Code, administers federal statutes dealing with legal matters and provides administrative services for the Supreme Court of Canada and the Exchequer Court. The Department also superintends the penitentiaries and administers the prison system of Canada.

Department of Labour.—The Department of Labour was established in 1900 by Act of Parliament (63-64 Vict., c. 24) and now operates under authority of the Department of Labour Act (R.S.C. 1952, c. 72). The Department administers, under the Minister of Labour, legislation dealing with: industrial relations, investigation of disputes, etc.; fair employment practices; the regulation of fair wages and hours of labour; reinstatement in civil employment; female employees equal pay; government annuities; government employee compensation; merchant seamen compensation; vocational training; promotion of labour-management co-operation services; co-ordination of services for rehabilitation of disabled civilians. The Department publishes the *Labour Gazette* and other publications, as well as general information on labour-management, employment, manpower and related subjects.

The Unemployment Insurance Commission, which also maintains the National Employment Service, reports to the Minister of Labour. The Canada Labour Relations Board acts on behalf of, and the National Advisory Council on Manpower acts in an advisory capacity to the Minister of Labour and the Merchant Seamen Compensation Board reports to the Minister of Labour. The Department is the official liaison agency between the Canadian Government and the International Labour Organization.

Department of Mines and Technical Surveys.—This Department was created by an Act of Parliament (13 Geo. VI, c. 17) which received Royal Assent on Dec. 10, 1949. Its establishment resulted from the reorganization of certain former departments. The Department's primary function is to provide technological assistance in the development of Canada's mineral resources through investigations, studies and research in the fields of geology, mineral dressing and metallurgy, and of geodetic, topographic and other surveys. The Department is under the Minister of Mines and Technical Surveys and is divided into five branches: the Surveys and Mapping Branch, the Geological Survey of Canada, the Mines Branch, the Dominion Observatories, and the Geographical Branch.

The Department also administers the Explosives Act which regulates the manufacture, testing, sale, storage and importation of explosives, and the Emergency Gold Mining Assistance Act which provides cost-aid assistance to the Canadian gold industry.

Boards and Commissions are: Canadian Board on Geographical Names; Board of Examiners for Dominion Land Surveyors; International Boundary Commission and Interprovincial Boundary Commissions.

Department of National Defence.—The Department of National Defence was established on Jan. 1, 1923, by the Department of National Defence Act, 1922, and was an amalgamation of the Departments of Militia and Defence, the Naval Service and the Air Board. The Department and the Armed Services now operate under the National Defence Act (R.S.C. 1952, c. 184).

In 1940 additional Ministers for Naval and Air Services were appointed and the Department was organized under a Minister of National Defence and two additional Ministers so that there was a Minister and staff for each of the Armed Services. Upon demobilization of the wartime forces the appointment of Ministers of National Defence for Naval Services and Air Service ceased and the Armed Forces were, in 1946, again administered by the Minister of National Defence without additional ministers. In 1953 under authority of an amendment to the National Defence Act an Associate Minister of National Defence was appointed, but in 1954 this appointment became vacant and the Department is again administered solely by the Minister of National Defence.

Department of National Health and Welfare.—This Department was established in October 1944 under the authority of the Department of National Health and Welfare Act (R.S.C. 1952, c. 74). The Department, headed by the Minister of National Health and Welfare, is composed of three branches—Health, Welfare, and Administration—and is administered through two Deputy Ministers.

The Health Branch is divided into three directorates—Health Services, Food and Drugs, and Indian Health Services. It has 14 Divisions active in certain public health fields divided into five main groups—Medical Advisory, Research Development, Environmental Health, Health Insurance Studies, and Health Grants Administration—each of which is headed by a Principal Medical Officer.

The Welfare Branch is made up of the Divisions of Family Allowances and Old Age Security, Old Age Assistance, and Blind and Disabled Persons Allowances. The Department is also responsible for federal civil defence planning, with the Civil Defence Co-ordinator reporting to both Deputy Ministers. The Administration Branch includes divisions where activities cover both health and welfare fields, such as research, information, legal and library services, as well as administrative, personnel and purchasing and supply services.

National Film Board.—The National Film Board was established in 1939 and the National Film Act (R.S.C. 1952, c. 185) provides for a Board of Governors of nine members—a Government Film Commissioner, appointed by the Governor in Council, who is Chairman of the Board, three members from the public service of Canada and five members from outside the public service. The Board reports to Parliament through a designated Minister of the Crown (at present the Minister of Citizenship and Immigration). The Board is responsible for advising the Governor in Council on film activities and is authorized to produce and distribute films in the national interest and in particular films “designated to interpret Canada to Canadians and to other nations”.

National Library.—The National Library Act, proclaimed Jan. 1, 1953, brought the National Library into being. Though at an early stage of organization, the Library publishes *Canadiana*—a monthly catalogue of new publications relating to Canada—and work is well advanced on a national union catalogue to serve as a key to the contents of all important libraries in Canada. The National Librarian reports to the Minister of Citizenship and Immigration.

Department of National Revenue.—From Confederation until May 1918, customs and inland revenue Acts were administered by separate departments; after that date they were amalgamated under one Minister as the Department of Customs and Inland Revenue. In 1921 the name was changed to the Department of Customs and Excise. In April 1924 collection of income taxes was placed under the Minister of National Revenue and under the Department of National Revenue Act, 1927, the Department became known as the Department of National Revenue.

The Customs and Excise Division of the Department is responsible for the assessment and collection of customs and excise duties as well as sales and excise taxes, by ports and outposts. The Taxation Division is responsible for the assessment and collection of income taxes and succession duties by 29 district offices throughout Canada.

The Minister of National Revenue is responsible to Parliament for the Income Tax Appeal Board and also reports to Parliament for the Canadian Broadcasting Corporation.

Department of Northern Affairs and National Resources.—The Department of Northern Affairs and National Resources was established in December 1953, superseding the Department of Resources and Development. In addition to Administration Services, which performs auxiliary functions, the Department is divided into seven branches: the National Parks Branch administers the National Parks and National Historic Parks of Canada, National Historic Sites, and wildlife matters coming within the jurisdiction of the Federal Government; the Water Resources Branch is responsible for the investigation of water power resources, for the administration of federal assistance to the provinces under the Canada Water Conservation Assistance Act and for federal interests in certain joint federal-provincial construction projects; the Northern Administration and Lands Branch is responsible for the administration of various Federal Acts, Territorial ordinances and regulations pertaining to the government of the Northwest Territories, for the conduct of certain business arising from the general administration of the Yukon Territory, for the administration of natural resources in those Territories, and for Eskimo affairs, as well as for certain lands and mineral rights in the provinces vested in the Crown in the right of Canada; the Forestry Branch conducts investigations in the protection and utilization of the forest resources of Canada, maintains forest experiment stations and forest products laboratories and administers federal assistance to the provinces under the Canada Forestry Act; the Natural History Branch and Human History Branch of the National Museum of Canada are responsible for research, publication of scientific studies, and public exhibitions in their respective fields of natural history and human history; and the Canadian Government Travel Bureau promotes the tourist industry by encouraging tourist travel in Canada.

The Minister of Northern Affairs and National Resources is also responsible to Parliament for the Eastern Rockies Forest Conservation Board, the Northern Canada Power Commission, and the National Battlefields Commission. The Historic Sites and Monuments Board of Canada, an honorary body of recognized historians representing the various provinces, and the Advisory Board on Wildlife Protection act in an advisory capacity to the Minister in those fields. The Deputy Minister is Commissioner of the Northwest Territories.

Post Office Department.—Administration and operation of the Canada Post Office, by virtue of the Post Office Act (R.S.C. 1952, c. 212) and under the Postmaster General, includes all phases of postal activity, personnel, mail handling, postal accommodation, transportation of mails by land, water, rail and air and the direction and control of financial services including the operation of money order and savings bank business.

Public Archives.—The Public Archives was founded in 1872 and is administered under the Public Archives Act (R.S.C. 1952, c. 222) by the Dominion Archivist who has the rank of a Deputy Minister and reports to Parliament through the Minister of Citizenship and Immigration. Its purpose is to assemble and make available to the public a comprehensive collection of historical source material relating to the history of Canada. Major emphasis is placed on official records of the Government and the personal papers of political leaders and other prominent figures. These are supplemented by copies of many records in the British and French archives that relate to Canada, a fine map collection, a historical library, and many prints, paintings and photographs.

Department of Public Printing and Stationery.—This Department was established in 1886 and is in the charge of the Queen's Printer and Controller of Stationery.

The Department is responsible for supplying all requirements of printing and stationery to Parliament and Departments of the Canadian Government; the distribution and sale of government publications; the publication of the *Canada Gazette*, and all departmental reports, papers, etc., required to be published by authority of the Governor General in Council (R.S.C. 1952, c. 226) and the publication of the Statutes of Canada (R.S.C. 1952, c. 230).

The Department of Public Printing and Stationery is under the jurisdiction of the Secretary of State.

Department of Public Works.—This Department was constituted in 1867 and operates under the legislative authority of the Public Works Act and other Acts of Parliament. It is responsible for the management, charge and direction of the public works of Canada and except as specifically provided in other Acts attends to the construction and maintenance of public buildings, wharves, piers, roads and bridges and the undertaking of dredging and navigable waters protection work. The Department maintains architectural and engineering staffs in each province in addition to the Administrative, Architectural, Engineering and Purchasing and Stores Branches at Ottawa. In 1954 the Fire Prevention Branch of the Department of Insurance was transferred to the Department of Public Works. This branch was organized in 1919 and has, since that time, maintained fire-loss records, made inspections, reported on fire protection legislation and protection methods and endeavoured to extend and co-ordinate fire prevention work in Canada.

The Minister of Public Works is responsible to Parliament for the Central Mortgage and Housing Corporation and for federal interests in the Trans-Canada Highway.

Department of the Secretary of State.—The Secretary of State and Registrar General of Canada is the official medium of communication with the Throne through the Governor General, as well as between the federal and provincial governments through the Lieutenant-Governors, and is the custodian of the Great Seal of Canada and of the Privy Seal of the Governor General. He is responsible for the preparation and tabling of returns in Parliament. He administers legislation relating to patents of invention, trade marks, industrial designs, timber marking, copyright, companies, boards of trade, the registration of trade unions, public officers, public documents and governmental and parliamentary translations. He is also the Custodian of Enemy Property.

The Secretary of State has certain responsibilities with respect to civilian decorations, precedence and ceremonial. The Committee on the use of Parliament Hill and the National War Memorial falls within his purview. He is the Minister of the Department of Public Printing and Stationery and the spokesman in Cabinet and Parliament for the Civil Service Commission and the Chief Electoral Officer.

Trade and Commerce.—The Department of Trade and Commerce was established by Act of Parliament on June 23, 1887, but did not function until Dec. 5, 1892, when an Order in Council to this effect was passed. Before the formation of the Department, assistance in the development of Canada's external trade was provided by eight Canadian Commercial Agents—five in the West Indies, two in Great Britain and one in France—who served on a part-time basis and were responsible to the Minister of Finance. In 1895 a Canadian Commercial Agent was appointed at Sydney, Australia, as the first full-time salaried Agent of the Department.

The framework of the present Trade Commissioner Service emerged during the next decade or so, the Commercial Agents gradually giving place to career Trade Commissioners. There are now 121 Trade Commissioners serving at Headquarters and abroad in 55 posts (including Assistant Trade Commissioners and agricultural, fisheries and timber specialists). Where Trade Commissioners are members of a mission maintained by the Department of External Affairs they hold diplomatic status and are known as Commercial Counsellors or Commercial Secretaries.

The Department provides a wide range of services to Canadian businessmen. It comprises: the Canadian Trade Commissioner Service, Commodities Branch (including the Transportation and Trade Services Division), Agriculture and Fisheries Branch, International Trade Relations Branch, Information Branch, Industrial Development Branch, Economics Branch, Standards Branch, International Economic and Technical Co-operation Division and the Canadian Government Exhibition Commission.

The following boards, commissions, Crown companies and agencies report to Parliament through the Minister of Trade and Commerce—seven of them through his capacity as Chairman of the Privy Council Committee on Scientific and Industrial Research: Board of Grain Commissioners, Canadian Wheat Board, Dominion Bureau of Statistics, Export Credits Insurance Corporation, Northern Ontario Pipe Line Crown Corporation, Trans-Canada Air Lines, Atomic Energy Control

Board, Atomic Energy of Canada Limited, Canadian Patents and Development Limited, National Research Council, Eldorado Mining and Refining Company Limited, Eldorado Aviation Limited, and Northern Transportation Company Limited.

Department of Transport.—The Department was created on Nov. 2, 1936, from the former Department of Marine, Railways and Canals and the Civil Aviation Branch of the Department of National Defence (R.S.C. 1952, c. 79).

The work of the Department consists of four main Services: Marine, Air, Canals and Railways. The work of the Marine Service includes aids to navigation, nautical and pilotage services, marine agencies, steamship inspection and floating equipment and direct supervision over 300 public harbours; seven other harbours come under supervision of the Department but are administered by Commissions. Air Services cover the operation of civil aviation, meteorological and telecommunication branches. The latter includes the administration and regulation of radar, radio marine and radio aeronautical aids to navigation and communication by wire and by government telegraph and telephone. The Canal Service has jurisdiction over the canals and canalized waterways of Canada. These include the main or primary canals on the St. Lawrence River and Great Lakes and a number of subsidiary or secondary canals.

Other services of the Department are in connection with the Government owned companies: the Canadian National Railways, Hudson Bay Railway, Canadian Government Railway, Canadian National (West Indies) Steamship Service and the Prince Edward Island Ferry and Terminals.

The Minister of Transport is responsible to Parliament for the following boards and commissions: the Air Transport Board; Board of Transport Commissioners; Canadian Maritime Commission; Steamship Inspection Board; National Harbours Board; Park Steamship Company Limited; Canadian National Railway Securities Trust; the St. Lawrence Seaway Authority; and the Canadian Overseas Telecommunication Corporation.

Department of Veterans Affairs.—This Department, established in 1944 (R.S.C. 1952, c. 80), is concerned exclusively with the welfare of veterans and includes medical, dental and welfare services, land settlement and prosthetic services and insurance. The Veterans' Bureau assists veterans in the preparation and presentation of pension claims.

The Minister of Veterans Affairs is also responsible for the Canadian Pension Commission and the War Veterans Allowance Board. The Department has administrative offices in all the larger cities across Canada and at London, England.

Section 2.—Crown Corporations

The Crown corporation form of public enterprise is not a new type of organization in Canada but in recent years, as the work of government has become more complex, greater reliance has been placed on it as the appropriate instrument for administering and managing many public services in which business enterprise and public accountability must be combined.

The use of the corporate device to harmonize public responsibility in the development of economic resources and the provision of public services with the pursuit of commercial and industrial objectives has led to the adoption of many different forms and formulas of management. The most usual practice has been to set up a corporation under the provisions of a special Act of Parliament which defines its purpose and sets forth its powers and responsibilities. However, during World War II the Minister of Munitions and Supply was authorized to procure the incorporation of companies under the federal Companies Act, 1934, or under any provincial companies Act to which he might delegate any of the powers conferred on him under the Department of Munitions and Supply Act or any Order in Council. Under this legislation about 28 companies were created to serve a wide variety of purposes; most of these companies have since been wound up.

Following the successful experience during the war years in relying on the Companies Act for the establishment of Crown companies, similar incorporating powers were granted by an amendment to the Research Council Act and have been incorporated in the Atomic Energy Control and the Defence Production Acts.

In 1946 the Government Companies Operation Act was passed to regulate the operation of companies formed under the Companies Act. However, it was applicable only to a relatively small number of companies and, in order to establish a more uniform system of financial and budgetary control and of accounting, auditing and reporting for Crown corporations generally, Part VIII of the Financial Administration Act was enacted in 1951 and brought into operation by proclamation on Oct. 1, 1952. Upon its enactment the financial provisions of the Government Companies Operation Act were repealed.

One of the more interesting features of the new legislation is the attempt that has been made to define and classify Crown corporations.* The Act defines a Crown corporation as a corporation that is ultimately accountable, through a Minister, to Parliament for the conduct of its affairs and establishes three classes of corporation: departmental, agency and proprietary.

Departmental Corporations.—A departmental corporation is defined as a Crown corporation that is a servant or agent of Her Majesty in right of Canada and is responsible for administrative, supervisory or regulatory services of a governmental nature. Ten departmental corporations are listed in Schedule B to the Act:—

- Agricultural Prices Support Board
- Atomic Energy Control Board
- Canadian Maritime Commission
- Director of Soldier Settlement
- The Director, The Veterans' Land Act
- Dominion Coal Board
- Fisheries Prices Support Board
- National Gallery of Canada
- National Research Council
- Unemployment Insurance Commission.

Agency Corporations.—An agency corporation is defined as a Crown corporation that is an agent of Her Majesty in right of Canada and is responsible for the management of trading or service operations on a quasi-commercial basis or for the management of procurement, construction or disposal activities on behalf of Her Majesty in right of Canada. The following agency corporations are listed in Schedule C to the Financial Administration Act or have been subsequently added to that Schedule by the Governor in Council:—

- Atomic Energy of Canada Limited
- Canadian Arsenals Limited
- Canadian Commercial Corporation
- Canadian Patents and Development Limited
- Crown Assets Disposal Corporation
- Defence Construction (1951) Limited
- Federal District Commission
- National Battlefields Commission
- Northwest Territories Power Commission (now Northern Canada Power Commission)
- National Harbours Board
- Park Steamship Company Limited.

Two corporations, Canadian Sugar Stabilization Corporation Limited and Commodity Prices Stabilization Corporation Limited, listed in Schedule C when the Financial Administration Act was proclaimed, have since discontinued operations and surrendered their charters. By an Order in Council of June 15, 1955, the name of the Northwest Territories Power Commission (now Northern Canada Power Commission) was deleted from Schedule D and added to Schedule C effective Apr. 1, 1954.

Proprietary Corporations.—A proprietary corporation is defined as a Crown corporation that (1) is responsible for the management of lending or financial operations, or for the management of commercial or industrial operations involving the production of or dealing in goods and the supplying of services to the public, and (2) is ordinarily required

* Not all Crown corporations are subject to the provisions of the Financial Administration Act. For example, the Canadian Wheat Board, the Bank of Canada and its subsidiary, the Industrial Development Bank, because of the special nature of their functions, are excluded from operations of the Crown corporations. Part of the Act and are governed by their own acts of incorporation, as are such joint enterprises of the Federal and Provincial Governments as the Eastern Rockies Forest Conservation Board and the Halifax Relief Commission. Though not included in the Schedules to the Financial Administration Act, certain provisions of the Act apply to the Northern Ontario Pipe Line Crown Corporation, set up on June 7, 1956, to oversee the building of a cross-country natural gas pipeline. The Canada Council was set up under the Canada Council Act (assented to Mar. 28, 1957) as a Crown corporation but has been declared not an agency of the Crown and hence is not included in the Schedules to the Financial Administration Act.

to conduct its operations without Parliamentary appropriations. The following proprietary corporations are listed in Schedule D to the Act or have been subsequently added to that Schedule by the Governor in Council:—

Canadian Broadcasting Corporation
 Canadian Farm Loan Board
 Canadian National (West Indies) Steamships Limited
 Canadian Overseas Telecommunication Corporation
 Central Mortgage and Housing Corporation
 Eldorado Aviation Limited
 Eldorado Mining and Refining Limited
 Export Credits Insurance Corporation
 National Railways, as defined in the Canadian National-Canadian Pacific Act, 1933
 Northern Transportation Company Limited
 Polymer Corporation Limited
 The St. Lawrence Seaway Authority
 Trans-Canada Air Lines.

Departmental corporations are governed by the provisions of the Financial Administration Act that are applicable to departments generally. Agency and proprietary corporations, however, are subject to the provisions of the Crown corporations Part of the Act although, if there is any inconsistency between the provisions of that Part and those of any other Act applicable to a corporation, the Act provides that the latter prevail. There is provision in the Part for the control and regulation of such matters as corporation budgets and bank accounts, the turning over to the Receiver General of surplus money, limited loans for working-capital purposes, the awarding of contracts and the establishment of reserves, the keeping and auditing of accounts, and the preparation of financial statements and reports and their submission to Parliament through the appropriate Minister.

A further form of control is exercised by Parliament through the power to vote financial assistance. This may take different forms. For some corporations, capital may be provided by parliamentary grants, loans or advances that may subsequently be converted into capital stock or bonds; for others it may be by the issue of capital stock to be subscribed and paid for by the Government; or by the sale of bonds either to the Government or the public. A few corporations have financed all or a portion of their requirements from their own resources or earnings. Under a special financing arrangement a 15 p.c. excise tax charged on radio and television sets and their parts and accessories has been allocated to the revenue of the Canadian Broadcasting Corporation.

Prior to 1952 Crown corporations did not pay corporate income taxes. However the Income Tax Act was later amended so that, in respect of financial years commencing after Jan. 1, 1952, proprietary Crown corporations pay taxes on income earned in the same manner as any privately owned corporation. One desirable result of this amendment is that the financial statements of these Crown companies are now more comparable with those of private industry, with which in some instances they are in competition, and thus it is easier to assess the relative efficiency of their operations.

The functions of the various Crown corporations are given briefly in the following paragraphs. For a number of them further details are included in the Chapters dealing with the subjects concerned (*see* Index).

Agricultural Prices Support Board.—The Board was established in 1944 (R.S.C. 1952, c. 3) to assist in stabilizing the prices of agricultural products. The Board reports to Parliament through the Minister of Agriculture.

Atomic Energy Control Board.—In December 1946, by Act of Parliament (R.S.C. 1952, c. 11), the regulation and control of atomic energy in Canada were placed under the Atomic Energy Control Board. The Board reports to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research.

Atomic Energy of Canada Limited.—This Crown Company was incorporated in February 1952 under the Atomic Energy Control Act, 1946 (R.S.C. 1952, c. 11) to take over from the National Research Council on Apr. 1, 1952, the operation of the Chalk River project. The main functions of the Company are the research into many aspects of atomic energy, the operation of atomic reactors and the extraction, processing and marketing of the by-products of the reactors. The Company reports to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research.

Bank of Canada.—Legislation of 1934 (R.S.C. 1952, c. 13) provided for the establishment of a central bank in Canada, the function of which is to regulate credit and currency, to control and protect the external value of the Canadian dollar and to stabilize the level of production, trade, prices and employment so far as may be possible within the scope of monetary action. The Bank acts as the fiscal agent of the Government of Canada, manages the public debt and has the sole right to issue notes for circulation in Canada. The Bank is managed by a Board of Directors appointed by the Government and composed of a Governor, a Deputy Governor and 12 Directors; the Deputy Minister of Finance is also a member of the Board. The Bank reports to Parliament through the Minister of Finance and is governed by its own Act of incorporation. (*See footnote, p. 85.*)

The Canada Council.—Established by Order in Council dated Apr. 15, 1957, this Corporation of 21 members, a Director and an Associate Director functions under the terms of the Canada Council Act, assented to Mar. 28, 1957. Its functions are the encouragement of the arts, humanities and social sciences in Canada. Its work will be financed from the earnings of a \$50,000,000 Endowment Fund and a \$50,000,000 University Capital Grants Fund. In the making, managing and disposing of investments under the Act, the Council will have the advice of an Investment Committee of five, including the Chairman and another member of the Council. The proceedings of the Council are reported each year to Parliament through a member of the Queen's Privy Council for Canada.

Canadian Arsenals Limited.—This Company was established under the Companies Act by Letters Patent dated Sept. 20, 1945, and is subject to the Government Companies Operation Act (R.S.C. 1952, c. 133) and certain provisions of the Financial Administration Act (R.S.C. 1952, c. 116). The Company was set up to take over and operate Crown-owned plant and equipment. Among the items it now manufactures are propellants and explosives, small arms, radar equipment, and a wide variety of ammunition and components. Its divisions, together with the location of their plants, are as follows: Dominion Arsenal Division (Quebec and Val Rose, Que.); Explosives Division (Valleyfield, Que.); Filling Division (St. Paul l'Ermite, Que.); Gun Ammunition Division (Lindsay, Ont.); Small Arms Division (Long Branch, Ont.); Instrument and Radar Division (Scarborough, Ont.). The Company is responsible to Parliament through the Minister of Defence Production.

Canadian Broadcasting Corporation.—Legislation passed in 1936 (R.S.C. 1952, c. 32) provides that there shall be a corporation, to be known as the Canadian Broadcasting Corporation, to consist of a Board of 11 Governors appointed by the Governor in Council and chosen to give representation to the principal geographic divisions of Canada. The Board of Governors determines CBC policy and the Chairman of the Board is required to devote the whole of his time to the performance of his duties under the Act.

The General Manager is the Chief Executive of the Corporation and directs the operations and activities of the Corporation as well as the application of CBC policy as determined by the Board of Governors. He is assisted by regional management representatives located in the principal geographic regions of Canada (Newfoundland, the Maritime Provinces, Quebec, Ontario, the Prairie Provinces and British Columbia), and at Head Office by specialists in Programs, Sales, Operations, Administration, Finance, Engineering and Public Relations. Under the Canadian Broadcasting Act, the Corporation reports to Parliament through a Minister of the Crown (at present the Minister of National Revenue).

Canadian Commercial Corporation.—This Corporation was established on May 1, 1946, by the Canadian Commercial Corporation Act (R.S.C. 1952, c. 35). It purchases goods and commodities in Canada for the governments of other countries. It also acts as purchasing agent for international agencies such as the United Nations International Children's Emergency Fund and the United Nations Korean Reconstruction Agency. Other functions include arranging production and shipment of Canadian contributions of military stores to NATO countries. The Corporation also serves other departments of the Government of Canada. For instance it arranges for the purchase and production of supplies and services which the Department of Trade and Commerce is making available to other countries under the Colombo Plan. In carrying out its functions the Corporation works closely with the Department of Defence Production. It is responsible to Parliament through the Minister of Defence Production.

Canadian Farm Loan Board.—The Board was organized in 1929 to make loans to farmers secured by mortgage. The Board is responsible to Parliament through the Minister of Finance.

Canadian Maritime Commission.—The Commission was created in 1947 (R.S.C. 1952, c. 38) to consider and recommend policies and measures necessary for the operation, maintenance, manning and development of a merchant marine and a ship building and ship repairing industry. The Commission is responsible to Parliament through the Minister of Transport. (*See also Park Steamship Company Limited, p. 90.*)

Canadian National Railways.—Operating under an Act to incorporate the Canadian National Railway Company (1919), brought into effect by Order in Council of Jan. 30, 1923, the Canadian National Railways comprised at that time the old Intercolonial Railway and various eastern branch lines (all embraced in the Canadian Government Railways which were turned over to the

Canadian National Board for management and operation), the Canadian Northern Railway (1918) and the Grand Trunk Pacific (1923). The Hudson Bay Railway has been operated by the Canadian National Railways for the Canadian Government since 1935 and a separate accounting is made. Additional lines have been built or acquired and are operated by the Canadian National Railways. The Newfoundland Railway was entrusted to the Canadian National Railway Company in 1949 for operation and management. The CNR is controlled by a Chairman and Board of Directors and is responsible to Parliament through the Minister of Transport.

Canadian National (West Indies) Steamships Limited.—Through the medium of this Crown Company, the Federal Government provides direct steamship services to the West Indies in conformity with the Canada-West Indies Trade Agreement of 1926. The Company is responsible to Parliament through the Minister of Transport.

Canadian Overseas Telecommunication Corporation.—This Crown Company was created on Dec. 10, 1949, by Act of Parliament (R.S.C. 1952, c. 42) to acquire for public operation all external telecommunication assets in Canada, in keeping with the Commonwealth Telegraph Agreement, signed May 11, 1948. This Agreement was designed to bring about the consolidation and strengthening of the radio and cable communication systems of the Commonwealth. The Corporation is responsible to Parliament through the Minister of Transport.

Canadian Patents and Development Limited.—Canadian Patents and Development Limited is a Crown Corporation established in 1948, pursuant to authority granted in an amendment to the Research Council Act which was passed in 1946. The primary purpose of the Company is to make available to industry, through licensing arrangements, new processes developed by scientific workers of the National Research Council. Its services are equally available to other Government Departments, publicly supported institutions and universities. The Company also has cross-agency arrangements with similar government agencies in other Commonwealth countries. The Board of Directors is composed of representatives from the National Research Council, from Government Departments and from industry and the universities. Any profits that the Company may derive from licensing arrangements are available for further research and development. The Corporation reports to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research. At the present time this is the Minister of Trade and Commerce.

Canadian Wheat Board.—The Board was incorporated under the Canadian Wheat Board Act to market, in an orderly manner, in the interprovincial and export trade, grain grown in Canada. Its powers include authority to buy, take delivery of, store, transfer, sell, ship or otherwise dispose of grain. Except as directed by the Governor in Council, the Board was not originally authorized to buy grain other than wheat, but since Aug. 1, 1949, it may also buy oats and barley. Only grain produced in the designated area, which includes Manitoba, Saskatchewan, Alberta and parts of British Columbia and Ontario, is purchased by the Board, which controls the delivery of grain into elevators and railway cars in that area as well as the interprovincial movement and export of wheat, oats and barley generally. The Board is governed by its own Act of incorporation. (See footnote, p. 85.) It reports to Parliament through the Minister of Trade and Commerce.

Central Mortgage and Housing Corporation.—This Corporation was incorporated by Act of Parliament (R.S.C. 1952, c. 46) in December 1945 to administer the National Housing Acts. Under the National Housing Act, 1954 (2-3 Eliz. II, c. 23, as amended by 1956, c. 9), the Corporation insures mortgage loans made by approved lenders for home ownership and rental housing, makes direct loans, provides home improvement and rental guarantees, undertakes jointly with provincial governments the assembly of land and the construction of housing projects, conducts housing research, co-ordinates community planning and owns and manages rental housing units built for war workers and veterans. The Corporation also arranges for and supervises the construction of housing projects on behalf of the Department of National Defence. The Corporation is responsible to Parliament through the Minister of Public Works.

Crown Assets Disposal Corporation.—This Corporation is established under the Surplus Crown Assets Act (R.S.C. 1952, c. 260) and is subject to the Financial Administration Act (R.S.C. 1952, c. 116). In June 1944 War Assets Corporation was established by statute to replace War Assets Corporation Limited which had been incorporated in 1943. In 1949 the name of War Assets Corporation was changed to Crown Assets Disposal Corporation. The Corporation's function is to dispose of surplus Crown assets. It is responsible to Parliament through the Minister of Defence Production.

Defence Construction (1951) Limited.—This Company was established by Letters Patent in 1951 to take over the general undertakings of Defence Construction Limited. The Company carries out all defence construction with the exception of houses and aircraft runways and is responsible to Parliament through the Minister of Defence Production.

Director of Soldier Settlement and Director of the Veterans' Land Act.—The Director of Soldier Settlement (under the Act of 1919) is also the Director of the Veterans' Land Act, and in either capacity is legally a corporation sole. For administrative purposes however the programs carried on under both Acts constitute integral parts of the services provided by the Department of Veterans Affairs.

Dominion Coal Board.—The Board, created in 1947 under the Dominion Coal Board Act (R.S.C. 1952, c. 86), is charged with the duty of studying and recommending to the Government policies respecting the production, importation, distribution and use of coal in Canada. It also administers transportation subventions, other subsidies relating to coal and loans authorized under the Maritime Coal Production Assistance Act (R.S.C. 1952, c. 170). The Board reports to Parliament through the Minister of Mines and Technical Surveys.

Eastern Rockies Forest Conservation Board.—The Board was appointed in 1947 under the Eastern Rocky Mountain Forest Conservation Act which authorized an agreement between the Government of Canada and the Province of Alberta relating to the protection and conservation of the forests of that area of the eastern slope of the Rocky Mountains which forms part of the watershed of the Saskatchewan River. The function of the Board is to plan, supervise and undertake construction, operation and maintenance of projects and facilities necessary for the proper protection of the forests of the area to obtain the greatest possible flow of water in the Saskatchewan River and its tributaries.

During the first seven years of the agreement the Federal Government undertook to provide \$6,300,000 for capital expenditure and Alberta to provide funds for maintenance expenditures. During the period of capital expenditure the Federal Government agreed to appoint the Chairman and one member and the Province one member. After the capital period the arrangement was that the Federal Government appoint one member and that the Government of Alberta appoint two members and name one of the three as Chairman. This latter arrangement became effective on Apr. 1, 1955, and the Province of Alberta is now responsible for all future capital and maintenance costs of this area. The Board reports to Parliament through the Minister of Northern Affairs and National Resources. (See footnote, p. 85.)

Eldorado Aviation Limited.—Incorporated Apr. 23, 1953, to carry air traffic, both passenger and freight, for Eldorado Mining and Refining Limited and its wholly owned subsidiary, Northern Transportation Company Limited, the Company reports to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research.

Eldorado Mining and Refining Limited.—Set up in 1944 under the name of Eldorado Mining and Refining (1944) Limited (the date was omitted from the name in June 1952), the Company's business is that of mining and refining uranium ores in Canada. The Company is also the Government purchasing agent for all uranium produced in Canada. It reports to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research.

Export Credits Insurance Corporation.—This Company commenced operations in 1945 under the Export Credits Insurance Act, 1944 (R.S.C. 1952, c. 105) and is administered by a Board of Directors (including the Deputy Minister of Trade and Commerce, the Deputy Minister of Finance and the Governor of the Bank of Canada) with the advice of an Advisory Council. Its function is to insure Canadian exporters against non-payment by foreign buyers arising out of credit and political risks involved in foreign trade. The Corporation reports to Parliament through the Minister of Trade and Commerce.

Federal District Commission.—This Commission had its genesis in the Ottawa Improvement Commission, established by Parliament in 1899 to improve and beautify the National Capital by the development and construction of parks and driveways and to co-operate with the City of Ottawa in local improvement and conservation. Its membership is honorary in character and is appointed by the Governor in Council, and it reports to the Prime Minister. In 1927 the organization's name was changed to the Federal District Commission, its scope of operations widened to include adjacent areas, and its membership increased to ten. Under the FDC Act, one representative each of the cities of Ottawa and Hull (usually the mayor) is included in its membership.

The Commission maintains the grounds of all federal buildings in the National Capital area and landscapes the grounds of new government buildings. In the Ottawa-Hull area (exclusive of Gatineau Park), the Commission has developed over 3,000 acres of urban parks and 22 miles of scenic driveways.

In 1946 the Commission became the federal agency responsible for carrying out the National Capital Plan. Commission approval is required for the location, siting and exterior design of new federal buildings or for alterations to existing structures. The membership was further increased to permit the appointment of a commissioner resident in each of the provinces and a separate honorary committee was established by the Commission to advise on the development of Gatineau Park. The National Capital Fund, to which Parliament has made annual grants of \$2,500,000 since its inception in 1948, was made available to the Commission to execute the work of the National Capital Plan and a National Capital Planning Committee was appointed to act as a permanent honorary advisory body to the Commission on the implementation of the Plan.

Fisheries Prices Support Board.—The Board was set up in July 1947 (R.S.C. 1952, c. 120) to recommend to the Government price support measures when severe price declines occur. The Board functions under the direction of the Minister of Fisheries and consists of a Chairman, who

is a senior officer of the Department of Fisheries, and five members chosen from private and co-operative firms in the industry. The Board has authority to buy fishery products and to sell or otherwise dispose of them or to pay producers the difference between a price prescribed by the Board and the average price the product actually commands.

Halifax Relief Commission.—The Commission, a joint enterprise of the Legislature of Nova Scotia (Statutes of N.S., 1918, c. 61) and the Parliament of Canada (Statutes of Canada, 1918, c. 24), was incorporated to administer relief funds contributed for the assistance of sufferers in consequence of the disastrous explosion at Halifax, Dec. 17, 1917. (*See footnote, p. 85.*)

Industrial Development Bank.—The Bank, a subsidiary of the Bank of Canada, was incorporated in 1944 to provide loans to industrial enterprises where financing is not available through recognized lending organizations. (*See footnote, p. 85.*)

National Battlefields Commission.—This Commission was established by Act of Parliament in 1908 to preserve the historic battlefields at Quebec City. The Commission is composed of nine members, seven being appointed by the Federal Government and one each by the Provinces of Ontario and Quebec. The Commission is supported by an annual statutory grant from the Federal Government and is responsible to Parliament through the Minister of Northern Affairs and National Resources.

National Gallery.—The National Gallery was founded in 1880. By Act of Parliament in 1913 and re-enacted in 1951 it was placed under the management of a Board of Trustees appointed by the Governor General in Council and now operates under the National Gallery Act (R.S.C. 1952, c. 186). It is responsible to Parliament through a Minister of the Crown (at present the Minister of Citizenship and Immigration).

The first charge of the National Gallery is the development and care of the national art collections. Other important services are the arrangement of loans and exhibitions from abroad and from its own holdings for showing in Canada and abroad, the promotion of good industrial design and general extension work consisting of the distribution of reproductions for educational purposes, lectures, educational tours, publications, school broadcasts and art films.

National Harbours Board.—The Board was established by Act of Parliament in 1936. It is responsible for the administration of port facilities at Halifax, Saint John, Chicoutimi, Quebec, Three Rivers, Montreal, Vancouver, and Churchill. The Board is responsible to Parliament through the Minister of Transport.

National Research Council.—In 1917 the Research Council Act was passed and in 1928 laboratories for scientific research were established at Ottawa. The National Research Council now has Divisions of Pure and Applied Chemistry, Building Research, Mechanical Engineering, Radio and Electrical Engineering, Pure and Applied Physics, Applied Biology and Medical Research. Regional laboratories have been established at Saskatoon, Sask., and Halifax, N.S.

Patentable processes and improvements developed by the Council are made available under licence to industry through a Crown company, Canadian Patents and Development Limited, and any profits from the licensing arrangements are used for further research and development.

The Minister of Trade and Commerce as Chairman of the Privy Council Committee on Scientific and Industrial Research is responsible to Parliament for the National Research Council.

Northern Transportation Company Limited.—This Company was incorporated in 1947 under the title of Northern Transportation Company (1947) Limited, the date being omitted from the name in 1952. Previously a company chartered under an Alberta statute, it has been a wholly owned subsidiary of Eldorado Mining and Refining Limited since that Crown company was established and carries out the business of a common carrier in the Mackenzie River watershed. The Company is responsible to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research.

Northern Canada Power Commission.—The Commission was established by Act of Parliament in 1948 to bring electric power to points in the Northwest Territories where a need developed and where power could be provided on a self-sustaining basis. The Act was amended in 1950 to give authority to the Commission to provide similar services in Yukon Territory; the name of the Commission, formerly Northwest Territories Power Commission, was changed in 1956. The Commission is composed of a Chairman and two members appointed by the Governor in Council. It operates hydro-electric plants on the Snare River in the Northwest Territories and on the Mayo River in Yukon Territory and diesel-electric plants at Fort Smith and Fort Simpson, N.W.T. Additional plants are under construction at Whitehorse, Yukon, and Aklavik, N.W.T. The Minister of Northern Affairs and National Resources reports to Parliament for the Commission.

Park Steamship Company Limited.—After World War II this Company acted as an agent for Crown Assets Disposal Corporation in the sale and delivery to purchasers of Government war built ships. This work is completed but the Company remains available to carry out any appropriate duties. It has no staff of its own, any necessary work being done by the staff of the Canadian Maritime Commission (*see p. 85*). The Company reports to Parliament through the Minister of Transport.

Polymer Corporation Limited.—This Corporation was established in 1942 by Letters Patent under the Companies Act and is subject to the Government Companies Operation Act (R.S.C. 1952, c. 133) and the Financial Administration Act (R.S.C. 1952, c. 116). It was set up to construct and operate a synthetic rubber plant which now produces a variety of synthetic rubber products and some chemicals. The plant is located at Sarnia, Ont. The Company is responsible to Parliament through the Minister of Defence Production.

St. Lawrence Seaway Authority.—The St. Lawrence Seaway Authority was established by Act of Parliament in 1951 (R.S.C. 1952, c. 242) and came into force by proclamation on July 1, 1954. The Authority is incorporated for the purposes of constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montreal and Lake Erie. The Authority is composed of a President, a Vice-President and a Member and reports to Parliament through the Minister of Transport.

Trans-Canada Air Lines.—TCA came into being by Act of Parliament in 1937 (R.S.C. 1952, c. 268) to provide for the development of a publicly owned scheduled transcontinental air service. Transatlantic air services were inaugurated by TCA on behalf of the Canadian Government during World War II and scheduled operations were commenced at the end of the War. TCA now maintains passenger, mail and commodity traffic services over nationwide routes and also services to the United States, England, Scotland, Ireland, France, West Germany, Bermuda, the Bahamas, Jamaica, Barbados and Trinidad. TCA is responsible to Parliament through the Minister of Trade and Commerce.

Unemployment Insurance Commission.—The Commission was appointed on Sept. 24, 1940, under the provisions of the Unemployment Insurance Act, 1940 (R.S.C. 1952, c. 273) for the purpose of administering the Act and providing a national employment service. It is composed of three Commissioners—a Chief Commissioner, a Commissioner appointed after consultation with organizations representative of workers, and another after consultation with organizations representative of employers. Each Commissioner, including the Chief Commissioner, holds office for a period not exceeding ten years. The Commission is responsible to Parliament through the Minister of Labour.

Section 3.—Acts Administered by Federal Departments*

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada

NOTE.—Copies of individual Acts of Parliament and amendments may be obtained from the Queen's Printer, Ottawa, at prices of from 10 cents to \$1.50 per copy according to number of pages. Where duplications of certain Acts appear in the list, parts of these Acts are administered under the Departments given.

Department, Year and Chapter of Statute	Name of Act	Department, Year and Chapter of Statute	Name of Act
Agriculture— R.S.C. 1952		Agriculture— R.S.C. 1952— concl.	
3	Agricultural Prices Support	213	Prairie Farm Assistance
4	Agricultural Products Board	214	Prairie Farm Rehabilitation
5	Agricultural Products Co-operative Marketing	248	Seeds
6	Agricultural Products Marketing	294	Wheat Co-operative Marketing
9	Animal Contagious Diseases	1953-54 51	Criminal Code, Sect. 178, Race Track Betting
22, 305	Canada Dairy Products	1955 27	Canada Agricultural Products Standards
47	Cheese and Cheese Factory Im- provement	36	Meat Inspection
52, 313	Cold Storage		
66	Department of Agriculture		
81	Destructive Insect and Pest	Auditor General— R.S.C. 1952 116	Financial Administration
101	Experimental Farm Stations		
113	Feeding Stuffs		
115	Fertilizers	Citizenship and Immigration—	
126	Fruit, Vegetables and Honey	1927 37	St. Regis Indian Reservation
141	Hay and Straw Inspection	1934 29	Caughnawaga Indian Reserve
155	Inspection and Sale	1943 19	British Columbia Indian Reserves
167	Live Stock and Live Stock Pro- ducts		Mineral Resources
168	Live Stock Pedigree	R.S.C. 1952 33	Canadian Citizenship
172	Maple Products Industry	67	Department of Citizenship and Immigration
175	Maritime Marshland Rehabilita- tion	146	Immigration Aid Societies
177	Meat and Canned Foods	149	Indian
180	Milk Test	325	Immigration
209	Pest Control Products		

* Compiled from information supplied by the respective Departments.

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—continued

Department, Year and Chapter of Statute	Name of Act	Department, Year and Chapter of Statute	Name of Act
Civil Service Commission— R.S.C. 1952 48	Civil Service	Fisheries— R.S.C. 1952 61	Deep Sea Fisheries
		69	Department of Fisheries
		118	Fish Inspection
		119	Fisheries
Defence Production— R.S.C. 1952 35	Canadian Commercial Corporation	120	Fisheries Prices Support
62	Defence Production	121	Fisheries Research Board
260	Surplus Crown Assets	177	Meat and Canned Foods
		194	Northern Pacific Halibut Fishery (Convention)
		205	Pelagic Sealing (Provisional Agree- ment)
External Affairs— 1911 28	Respecting the International Boundary Waters Treaty and the existence of the International Joint Commission (amended 1914 c. 5, and 1922 c. 43)	244	Salt Fish Board
		252	Sockeye Salmon Fisheries (Con- vention)
1947-48 71	Carrying into effect the Treaties of Peace between Canada and Italy, Rumania, Hungary and Finland	293	Whaling Convention
R.S.C. 1952 50	Carrying into effect the Treaty of Peace between Canada and Japan	1952-53 15	Coastal Fisheries Protection
		44	North Pacific Fisheries Conven- tion
68	Department of External Affairs	1953-54 18	Northwest Atlantic Fisheries Con- vention
122	Food and Agriculture Organization of the United Nations	1955 34	Great Lake Fisheries Convention
142	High Commissioner of the United Kingdom		
218	Privileges and Immunities (NATO)	Insurance— R.S.C. 1952 31	Canadian and British Insurance Companies
219	Privileges and Immunities (United Nations)	49	Civil Service Insurance
275	United Nations	70	Department of Insurance
1953-54 54	Diplomatic Immunities (Common- wealth Countries)	100	Excise Tax (Part I)
		125	Foreign Insurance Companies
		170	Loan Companies
		251	Small Loans
		272	Trust Companies
		296	Winding-up (Part III)
		1952-53 28	Co-operative Credit Associations
Finance—		Justice— R.S.C. 1940 43	Treachery
	Appropriation (Annual)	1952 14	Bankruptcy
R.S.C. 1952 12	Canadian National Railways Fi- nancing and Guarantee (Annual)	71	Department of Justice
13	Bank	98	Exchequer Court
15	Bank of Canada	106	Expropriation
36, 309	Bills of Exchange	111	Farmers' Creditors Arrangement
82	Canadian Farm Loan	116	Financial Administration
	Diplomatic Services (special) Superannuation	127	Fugitive Offenders
110	Farm Improvement Loans	144	Identification of Criminals
116	Financial Administration	154	Inquiries
131	Gold Export	158	Interpretation
151, 326	Industrial Development Bank	159	Judges
156	Interest	160	Juvenile Delinquents
182	Municipal Grants	198	Official Secrets
183	Municipal Improvements Assist- ance	206	Penitentiary
204	Pawnbrokers	210	Petition of Right
221	Provincial Subsidies	217, 333	Prisons and Reformatories
232	Quebec Savings Banks	241	Royal Canadian Mounted Police
245	Satisfied Securities	253	Solicitor General
261, 336	Tariff Board	259, 335	Supreme Court
296	Winding-up	264	Ticket of Leave
315	Currency, Mint and Exchange Fund	299	Yukon Administration of Justice
1952-53 47	Public Service Superannuation	307	Canada Evidence
1953-54 28	Fire Losses Replacement Accounts	314	Combines Investigation
1955 31	Canadian National Railways Re- funding	322	Extradition
		1952-53 530	Crown Liability
46	Fisheries Improvement Loans	1953-54 51	Criminal Code
1956 1	Prairie Grain Producers Interim Financing	Labour— R.S.C. 1952 72	Department of Labour
2	Temporary Wheat Reserves	108	Fair Wages and Hours of Labour
29	Federal-Provincial Tax Sharing Agreements	132	Government Annuities
		134	Government Employees Compens- ation

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—continued

Department, Year and Chapter of Statute	Name of Act	Department, Year and Chapter of Statute	Name of Act
Labour—		National Revenue—	
R.S.C. 1952— 152	Industrial Relations and Disputes Investigation	<i>Taxation—concl.</i>	
178	Merchant Seamen Compensation	1944 21	
236	Reinstatement in Civil Employment	1950 27	Canada-U.S. Tax Convention (Income Tax)
286	Vocational Training Co-ordination	1956 35	
295	White Phosphorous Matches	1945 31	Canada-U.S. Tax Convention (Succession Duties)
1952-53 19	Canada Fair Employment Practices	1950 27	Canada-U.K. Income Tax Agreement
1955 50	Unemployment Insurance	1946 38	Canada-U.K. Succession Duty Agreement
1956 38	Female Employees Equal Pay	39	Canada-N.Z. Income Tax Agreement
		1948 34	Canada-France Income Tax Convention
Mines and Technical Surveys—		1951 40	Canada-France Succession Duty Convention
R.S.C. 1952 73	Department of Mines and Technical Surveys	1952 18	Canada-Sweden Income Tax Agreement
95, 318	Emergency Gold Mining Assistance	1951 41	
102	Explosives	42	
173	Maritime Coal Production Assistance	R.S.C. 1952 89	Dominion Succession Duty
		1957 22	
National Defence—		R.S.C. 1952 148	
R.S.C. 1952 63	Defence Services Pension	1953 40	
184	National Defence	1954 57	
283	Visiting Forces (British Commonwealth)	1955 54	Income Tax
284	Visiting Forces (North Atlantic Treaty)	1956 39	
285	Visiting Forces (United States of America)	1957 29	
		1955 10	Canada - Ireland Income Tax Agreement
National Health and Welfare—		11	Canada - Ireland Succession Duties Agreement
R.S.C. 1952 74	Department of National Health and Welfare	1956 5	Canada - Denmark Income Tax Agreement
<i>National Health—</i>		33	Canada - Germany Income Tax Agreement
R.S.C. 1952 29	Canada Shipping (Part V, Sick Mariners and Marine Hospitals)	1957 16	Canada-Netherlands Income Tax Agreement
123	Food and Drugs	17	Canada - South Africa Death Duties Agreement
165	Leprosy	18	Canada - South Africa Income Tax Agreement
201	Opium and Narcotic Drug		
220	Proprietary or Patent Medicine		
229	Public Works Health		
231	Quarantine		
<i>Welfare—</i>		<i>Customs and Excise—</i>	
R.S.C. 1952 17	Blind Persons	R.S.C. 1952 58	Customs
109	Family Allowances	60	Customs Tariff (amended by 316)
199	Old Age Assistance	75	Department of National Revenue
200	Old Age Security	99	Excise (amended by 319)
1954 55	Disabled Persons	100	Excise Tax (amended by 320)
National Library—		<i>Administered in Part—</i>	
R.S.C. 1952 330	National Library	1925 54	United States Treaty (smuggling)
		R.S.C. 1952 2	Aeronautics (amended by 302)
		9	Animal Contagious Diseases
		11	Atomic Energy Control
		22	Canada Dairy Products (amended by 305)
		29	Canada Shipping
		30	Canada Temperance
		44	Canadian Wheat Board
		55	Copyright
		59	Customs and Fisheries Protection
		81	Destructive Insect and Pest
		102	Explosives
		103	Export
		113	Feeding Stuffs
National Revenue—			
<i>Taxation—</i>			
1940 32			
1941 15			
1942 26			
1943 13	Excess Profits Tax		
1944 38			
1945 19			

Department, Year and Chapter of Statute	Name of Act	Department, Year and Chapter of Statute	Name of Act
National Revenue— <i>Administered in</i> <i>Part—concl.</i> R.S.C. 1952	114 Ferries 115 Fertilizers 118 Fish Inspection 119 Fisheries 123 Food and Drugs 126 Fruit, Vegetables and Honey 128 Game Export 131 Gold Export 135 Government Harbours and Piers 145 Immigration (amended by 325) 147 Importation of Intoxicating Liquors 155 Inspection and Sale 167 Live Stock and Live Stock Products 168 Live Stock Pedigree 169 Live Stock Shipping 172 Maple Products Industry 177 Meat and Canned Foods 187 National Harbours Board 193 Navigable Waters Protection 194 Northern Pacific Halibut Fishery (Convention) 201 Opium and Narcotic Drug Agreement 205 Pelagic Sealing (Provisional Agreement) 209 Post Control Products 212 Post Office 215 Precious Metals Marking 220 Proprietary or Patent Medicine 221 Quarantine 231 Radio 233 Seeds 248 Transport 271 Weights and Measures 292 White Phosphorous Matches 1953-54 27 Export and Import Permits 51 Criminal Code	Northern Affairs and National Resources—concl. R.S.C. 1952 192 196 224 263 299 300 301 331 1952-53 21 39 53 1953-54 4 1955 47 Post Office— R.S.C. 1952 212 Public Archives— R.S.C. 1952 222 Public Printing and Stationery— R.S.C. 1952 226 230 Public Works— 1935 34 R.S.C. 1952 91 106 114 138 193 216 228 269 324 Secretary of State— R.S.C. 1929 55 1947 24 1948 71 R.S.C. 1952 18 23, 306 30 53 54 55 62 77 83 87 149 195 203 208 223 225 234 235 247 263	National Wild Life Week Northern Canada Power Commission Public Lands Grants Territorial Lands Yukon Administration of Justice Yukon Placer Mining Yukon Quartz Mining Northwest Territories Canada Water Conservation Assistance Historic Sites and Monuments Yukon Department of Northern Affairs and National Resources International River Improvements Post Office Public Archives Public Printing and Stationery Publication of Statutes Public Works Construction Dry Docks Subsidies Expropriation Ferries Government Works Tolls Navigable Waters Protection, Part I Prime Minister's Residence Public Works Trans-Canada Highway Government Property Traffic Reparation Payment Trading with the Enemy (Transitional Powers) Italy, Romania, Hungary and Finland Treaties of Peace Boards of Trade Canada Elections Canada Temperance Companies Companies Creditors Arrangement Copyright Defence Production Department of State Disfranchising Dominion Controverted Elections Indian Northwest Territories Patent Pension Fund Societies Public Documents Public Officers Railway Regulations Seals Territorial Lands
Northern Affairs and National Resources— 1908 57, 58 1927 51 R.S.C. 1927 87 88 116 124 180 211 1928 32 1930 3 29 37 41 1932 35 55 1939 33 1947 59 R.S.C. 1952 24 90 128 162 179 189	National Battlefields at Quebec Respecting certain debts due the Crown Seed Grain Seed Grain Sureties Railway Belt Manitoba Supplementary Provisions Saskatchewan and Alberta Roads Railway Belt Water Lac Seul Conservation Alberta Natural Resources Manitoba Natural Resources Railway Belt and Peace River Block Saskatchewan Natural Resources Refunds (Natural Resources) Waterton - Glacier International Peace Park Rainy Lake Watershed Emergency Control Eastern Rocky Mountain Forest Conservation Canada Forestry Dominion Water Power Game Export Land Titles Migratory Birds Convention National Parks		

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—concluded

Department, Year and Chapter of Statute	Name of Act	Department, Year and Chapter of Statute	Name of Act
Secretary of State— concl.		Transport—concl.	
R.S.C. 1952	265 Timber Marking	42	Port Alberni Harbour Commis- sioners
267	Trade Unions	1948	10 New Westminster Harbour Com- missioners Refunding
270	Translation Bureau	1950	1 Maintenance of Railway Operation
295	White Phosphorous Matches	R.S.C. 1952	2, 302 Aeronautics
298	Yukon	16	Bills of Lading
307	Canada Evidence	20	Bridges
1952-53	49 Trade Marks and Unfair Com- petition	29	Canada Shipping
		34	Belleville Harbour Commissioners
		38	Canadian Maritime Commission
		39	Canadian National — Canadian Pacific
Trade and Commerce—		42	Canadian Overseas Telecommuni- cation Corporation
R.S.C. 1952	11 Atomic Energy Control	45	Carriage by Air
25	Canada Grain	79	Department of Transport
44	Canadian Wheat Board	135	Government Harbours and Piers
64	Defence Supplies	136	Government Railways
78	Department of Trade and Com- merce	137	Government Vessels Discipline
92	Electrical and Photometric Units	157	International Rapids Power De- velopment
94	Electricity Inspection	168	Live Stock Shipping
103	Export	174	Maritime Freight Rates
105	Export Credits Insurance	187	National Harbours Board
129	Gas Inspection	193	Navigable Waters Protection
140	Grain Futures	202	Passenger Tickets
147	Importation of Intoxicating Liquors	211	Pipe Lines
153	Inland Water Freight Rates	233	Radio
164	Length and Mass Units	234	Railway
191	National Trade Mark and True Labelling	242	St. Lawrence Seaway Authority
215	Precious Metals Marking	262	Telegraphs
239	Research Council	271	Transport (Board of Transport Commissioners)
257	Statistics	276	United States Wreckers
268	Trans-Canada Air Lines	291	Water Carriage of Goods
292	Weights and Measures	311	Canadian National Railways Capital Revision
1953-54	27 Export and Import Permits	1955	29 Canadian National Railways
1955	14 Exportation of Power and Fluids and Importation of Gas	31	Canadian National Refunding
1956	10 Northern Ontario Pipe Line Crown Corporation		
Transport—			
	Auditors for National Railways (Annual)		
	Canadian National Railways Fi- nancing and Guarantee (Annual)	Veterans Affairs—	
1907	22 Intercolonial Railway and Prince Edward Island Railway Em- ployees Provident Fund	R.S.C. 1920	54 Returned Soldiers' Insurance
		R.S.C. 1927	188 Soldier Settlement
1911	26 Toronto Harbour Commissioners	1936	47 Veterans' Assistance Commission
1912	55 Winnipeg and St. Boniface Harbour Commissioners	R.S.C. 1952	8 Allied Veterans Benefits
		51, 312	Civilian War Pensions and Allow- ances
	98 Hamilton Harbour Commissioners	80	Department of Veterans Affairs
1913	158 New Westminster Harbour Com- missioners	117	Fire Fighters War Service Benefits
		207, 332	Pension (amended 1953-54, c. 62)
	162 North Fraser Harbour Com- missioners	256	Special Operators War Service Benefits
1927	29 Canadian National (West Indies) Steamship Company	258	Supervisors War Service Benefits
		279, 338	Veterans Insurance
R.S.C. 1927	211 Railway Belt Water	280	Veterans' Land (amended 1953-54, c. 66)
1929	4 Canadian National Railways Pen- sions	281	Veterans Rehabilitation
		289	War Service Grants (amended 1953-54, c. 46)
	11 Canadian National Refunding	297	Women's Royal Naval Services and the South African Military Nursing Service (Benefits)
	12 Canadian National Montreal Ter- minals	340	War Veterans Allowance (amended 1955, c. 13)
1931	19, 20 Northern Alberta Railways		
	40 Beauharnois Light, Heat and Power	1952-53	27 Children of War Dead (Education Assistance) (amended 1953-54, c. 2)
1940	20 Beauharnois Light, Heat and Power	1953-54	65 Veterans Benefit (amended 1955, c. 43)
1947	26 Beauharnois Light, Heat and Power		

PART IV.—FEDERAL GOVERNMENT EMPLOYMENT

The Civil Service Commission.*—The Federal Civil Service comprises, in the widest sense, all servants of the Crown—other than those holding political or judicial office—who are employed in a civil capacity and whose remuneration is paid wholly and directly from moneys voted by Parliament. Collectively they form the staffs of the various departments, commissions, boards, bureaux and other agencies of the Federal Government. Nearly every category of occupation is represented in the Civil Service. A few civil servants are appointed by one or both Houses of Parliament directly and a considerable number are appointed by departments and other agencies in accordance with the provisions of certain statutes, generally with executive approval of the Governor in Council. The remainder, by far the majority, are selected and appointed by the Civil Service Commission of Canada.

The Civil Service Commission as the central personnel agency of the Federal Government is the custodian of the merit principle in respect of both initial appointments and promotions. The steps by which the Commission came to be constituted in its present form is the record of Civil Service reform in Canada which began a year after Confederation and culminated in the passing of the Civil Service Act of 1918.

Recruitment.—The recruitment of civil servants is conducted by means of open competitive examination through which every citizen has the right to compete for positions in the service of his country. Examinations are held periodically as the staff requirements of the public service dictate. Any Canadian citizen may apply for headquarters positions open at Ottawa but applicants for local positions must be residents of the locality in which the vacancy occurs. Competitive examinations are announced through the press and through posters displayed on the public notice boards of post offices, offices of the National Employment Service, offices of the Civil Service Commission, public libraries and elsewhere. The examinations may be written, oral, a demonstration of skill, or any combination of these.

The names of persons successful in Civil Service examinations, arranged in order of rank, are recorded on eligible lists. Examination results are formally announced by publication in the *Canada Gazette* and each candidate—successful or unsuccessful—is advised of his standing. Appointments are made as required from the eligible lists which usually remain valid for one year.

The rank of the various successful candidates on eligible lists is influenced by the 'veteran's preference'. Actually the preference is limited largely, in accordance with its definition by law, to members of the Armed Forces who have served overseas in World War I or II or in the Korean theatre of operations. The highest order of preference is the 'disability preference' accorded to pensioners of the Armed Forces who as a result of their war service are unable to re-establish themselves in a civilian occupation.

In recent years the Civil Service Commission has decentralized its operations and now has ten district offices and six sub-offices across the country. The Commission is granting an increasing measure of autonomy and responsibility to these offices to permit more efficient service to field agencies.

Staff Training.—In 1947 the Commission set up a Staff Training Division to promote and guide a systematic service-wide training scheme. The training scheme, sponsored by the Commission, is a joint venture undertaken in co-operation with Federal Government departments most of which have parallel training divisions. The Commission's Training Division is primarily a co-ordinating agent. It promotes and organizes activities, trains departmental instructors in the presentation of courses, prepares and on occasion gives courses of general application to all departments, publishes booklets and other training aids, assists departments in developing training to meet specialized needs, and acts as a general clearing-house for the exchange of information on training matters.

* Revised by M. M. Maclean, Secretary of the Civil Service Commission of Canada, Ottawa.

Promotion.—It is a prime objective of the Civil Service Act to create a career service. The result is that promotion, like entrance to the Service, is based on merit and a sound promotion system is developing. The present procedure involves the consideration of three factors: seniority or length of service; efficiency of candidates in their present positions; and fitness for the vacant positions. An automatic rating on seniority is given by the Commission and ratings on efficiency and fitness are provided by the department concerned. Appeal machinery under Commission jurisdiction has been set up for those employees who feel that their qualifications have not been properly assessed.

Position Classification and Compensation.—Provision is made in the Civil Service Act for the classifying of positions in the public service. A system of position classification was instituted in 1919 and positions with like duties and responsibilities were classified alike and remunerated equally. Each position has a title, a set of tasks or duties which are proper to it in the organization in which it occurs and, arising out of these duties, a set of qualifications appropriate for their performance. Positions with duties of similar kind are grouped together under a common title to form a class and grades within the class reflect the level of responsibility.

The determination of rates of compensation for each class is a continuing responsibility of the Commission and salary and wage surveys are conducted constantly. Position classification is a mainspring in the Commission's primary function of recruitment, involving the fixing of standards of qualification for each class of position.

Organization and Methods.—In recent years there has been an increasing awareness of the extent to which economical administration depends on the adoption of modern management techniques and devices. In 1948 the Commission set up an Organization and Methods Service to study problems of management in collaboration with officials directly responsible for major areas of administration. Briefly, this Service affords practical assistance to departments and other agencies of the Government through the systematic examination of structure, operations, procedures and work methods. Its growing facilities are offered free of charge to all departments.

Statistics of Federal Government Employment.*—The basic concept behind the survey of Federal Government employment, started in April 1952, was that it should comprehend all classes of employees (excluding members of the Armed Services but including Force members of the Royal Canadian Mounted Police) for all services of government, with separate treatment accorded "agency and proprietary corporation and other quasi-independent government bodies" because of their economic or proprietary nature; hence the title "Federal Government Employment" in contrast to the title used for the previous survey "Civil Service of Canada" with its restrictions as to services and classes of employees. Comparison with figures of previous years should be made only after careful consideration of the differences in composition of services and classification of employees.

Included in this survey as "governmental services" and reported in Tables 1, 2 and 3, are all the administrative functions of the Federal Government (see pp. 77-84) and all agencies, boards and commissions where the nature of the undertaking is not of a proprietary or economic character, but where payments of salaries and/or wages are by legislative appropriation from the Consolidated Revenue Fund. Statutory employees are also included as their salaries are paid from the Consolidated Revenue Fund in accordance with the terms of an Act of Parliament establishing the position.

The "classified" group embraces several classes of employees including: those who are subject to the Civil Service Act and Civil Service Superannuation Act; those not subject to these Acts but who are employed under other enabling legislation or regulations; and the statutory group, most of whom are dismissable only by an Address to both Houses of Parliament, such as members of the judiciary. Employees in the classified group are occupants of continuing salaried positions. "Prevailing rate" employees are those who occupy continuing positions which are subject to prevailing rate legislation and therefore

* Prepared in the Public Finance and Transportation Division, Dominion Bureau of Statistics.
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are paid on the basis of the going salary in the area in which the individual works. Prevailing Rate Employees General Regulations also are applicable to the third major group entitled "ships' officers and crews". These three groups comprise what may be called the occupants of continuing positions in the governmental services. In addition, there is a group entitled "casuals and others" which includes persons occupying positions on a non-continuing basis.

Employment of persons working in agency and proprietary corporations and other quasi-independent government bodies are detailed separately in Table 4 since they do not pay their employees from appropriations specifically designated for the payment of salaries or wages. The activities falling in this category are as follows:—

Atomic Energy of Canada Limited	Export Credits Insurance Corporation
Bank of Canada	Federal District Commission
Canadian Arsenal Limited	Halifax Relief Commission
Canadian Broadcasting Corporation	Industrial Development Bank
Canadian Commercial Corporation	International Pacific Salmon Fisheries Commission
Canadian Farm Loan Board	International Pacific Halibut Commission
Canadian National Railways	National Harbours Board
Canadian National (West Indies) Steamships Limited	Northern Transportation Company Limited
Canadian Overseas Telecommunication Corporation	Northern Canada Power Commission
Canadian Patents and Development Limited	Polymer Corporation Limited
Canadian Wheat Board	Prince Edward Island Car Ferry
Central Mortgage and Housing Corporation	St. Lawrence Seaway Authority
Crown Assets Disposal Corporation	The Office of the Custodian
Defence Construction (1951) Limited	Trans-Canada Air Lines
Eldorado Mining and Refining Limited	

The figures pertaining to this group are published in aggregate only in order to preclude the possibility of disclosure concerning the operations of any particular agency.

1.—Employees in Governmental Services of the Federal Government by Month, Years Ended Mar. 31, 1955 and 1956

NOTE.—Includes departments, boards, commissions, etc. listed in Table 3 but excludes certain Federal Government agencies, proprietary corporations, etc., figures for which are given in Table 4. Figures for 1952-53 are given at p. 113 of the 1955 Year Book and for 1953-54 at p. 128 of the 1956 Year Book.

Fiscal Year and Month	Classified	Prevailing Rate	Ships' Officers and Crews	Total	Casuals and Others
	No.	No.	No.	No.	No.
1954-55—					
April.....	138,061	22,390	2,028	162,479	11,512
May.....	139,450	23,640	2,218	165,308	12,737
June.....	140,465	24,995	2,257	167,717	13,544
July.....	139,475	25,808	2,335	167,618	15,023
August.....	139,696	25,636	2,473	167,805	17,367
September.....	140,142	25,353	2,418	167,943	15,868
October.....	140,110	24,714	2,196	167,020	14,678
November.....	140,558	24,003	2,246	166,807	14,635
December.....	141,173	24,275	2,101	167,549	14,125
January.....	141,783	23,656	1,969	167,408	13,266
February.....	142,480	24,188	1,919	168,587	12,709
March.....	142,150	24,231	1,962	169,343	12,570
1955-56—					
April.....	142,384	24,164	2,141	168,689	12,580
May.....	142,838	24,977	2,306	170,121	12,846
June.....	142,724	26,193	2,369	171,286	14,735
July.....	141,861	27,168	2,462	171,491	15,774
August.....	141,277	26,215	2,515	170,007	16,077
September.....	141,868	25,431	2,275	169,574	15,872
October.....	141,589	24,724	2,359	168,672	15,214
November.....	142,297	24,320	2,154	168,771	13,898
December.....	142,934	24,070	2,239	169,243	13,079
January.....	143,558	23,746	1,972	169,276	12,409
February.....	144,058	23,858	1,838	169,754	12,615
March.....	145,083	23,524	1,928	170,535	12,300

2.—Earnings of Employees in Governmental Services of the Federal Government by Month, Years Ended Mar. 31, 1955 and 1956

NOTE.—Includes departments, boards, commissions, etc. listed in Table 3 but excludes certain Federal Government agencies, proprietary corporations, etc., figures for which are given in Table 4. Figures for 1952-53 are given at p. 113 of the 1955 Year Book and for 1953-54 at p. 129 of the 1956 Year Book.

Fiscal Year and Month	REGULAR EARNINGS				
	Classified	Prevailing Rate	Ships' Officers and Crews	Total	Casuals and Others
	\$	\$	\$	\$	\$
1954-55					
April.....	35,367,522	4,763,497	475,383	40,606,402	2,200,742
May.....	35,614,242	4,955,540	532,332	41,102,114	2,257,091
June.....	35,895,810	5,139,100	545,018	41,579,928	2,454,458
July.....	35,861,032	5,319,656	560,099	41,740,787	2,871,376
August.....	35,912,345	5,035,273	602,802	41,550,420	3,241,668
September.....	35,866,683	5,257,570	592,651	41,716,904	2,939,514
October.....	36,084,397	4,947,181	523,793	41,555,371	2,548,237
November.....	36,251,568	5,013,890	550,466	41,815,924	2,735,793
December.....	36,389,890	5,205,008	511,894	42,106,792	2,555,868
January.....	36,582,958	4,711,135	476,063	41,770,156	2,593,438
February.....	36,787,074	4,859,668	443,791	42,090,533	2,309,850
March.....	36,884,572	5,091,831	475,725	42,452,128	2,469,050
OVERTIME EARNINGS¹					
	\$			\$	
April.....	183,985	..	..	236,046	..
May.....	110,091	..	..	249,369	..
June.....	280,356	..	..	310,039	..
July.....	176,126	..	..	314,878	..
August.....	99,240	..	..	346,513	..
September.....	92,384	..	..	274,142	..
October.....	98,179	..	..	327,998	..
November.....	153,986	..	..	256,794	..
December.....	223,654	..	..	258,568	..
January.....	184,741	..	..	217,518	..
February.....	1,314,650 ²	..	..	232,055	..
March.....	127,971	..	..	282,083	..
REGULAR EARNINGS					
	\$	\$	\$	\$	\$
April.....	36,743,285	5,008,061	502,924	42,254,270	2,305,022
May.....	36,860,365	5,171,716	561,636	42,593,717	2,436,163
June.....	36,876,663	5,548,028	558,505	42,983,196	2,808,996
July.....	36,891,460	5,442,554	605,932	42,939,976	2,920,681
August.....	36,753,784	5,569,700	603,621	42,927,105	3,179,900
September.....	36,828,115	5,403,156	549,565	42,780,836	3,000,623
October.....	36,949,261	4,987,861	561,488	42,498,610	2,811,363
November.....	37,064,797	5,227,089	517,828	42,809,714	2,692,408
December.....	37,262,675	5,188,208	525,268	42,976,151	2,511,468
January.....	37,428,898	5,524,275	457,064	43,410,237	2,464,385
February.....	37,552,319	5,421,992	429,789	43,404,100	2,463,807
March.....	37,676,926	5,215,406	453,244	43,345,576	2,519,897
OVERTIME EARNINGS					
	\$	\$	\$	\$	\$
April.....	68,837	238,591	9,509	316,937	56,141
May.....	106,001	193,190	14,600	313,791	50,986
June.....	249,895	198,855	15,330	464,080	47,612
July.....	99,449	218,023	22,754	340,226	77,613
August.....	221,990	157,776	19,592	399,358	54,510
September.....	214,555	202,852	20,513	437,920	73,583
October.....	195,432	193,293	18,781	407,506	83,835
November.....	244,909	200,272	16,862	462,043	49,027
December.....	317,858	215,057	15,407	548,382	50,382
January.....	255,348	210,135	11,723	477,206	41,486
February.....	1,553,644 ²	237,128	2,982	1,793,754	54,001
March.....	215,720	286,371	6,887	508,978	63,545

¹ Total in this section includes prevailing rate, ships' crews, casuals and others; breakdown not available.
² Includes Post Office Christmas rush overtime payments.

3.—Federal Government Employees by Department and Principal Branch or Service as at Mar. 31, 1956, and Regular Earnings for the Year Ended Mar. 31, 1956

NOTE.—Excludes certain Federal Government agency and proprietary corporations, etc., figures for which are given in Table 4.

Department and Branch or Service	Classified		Prevailing Rate		Totals		Casuals and Others	
	Em- ployees	Earnings	Em- ployees	Earnings	Em- ployees	Earnings	Em- ployees	Earnings
	No.	\$'000	No.	\$'000	No.	\$'000	No.	\$'000
Agriculture	5,810	22,112.3	997	2,783.5	6,807	24,895.8	637	2,036.8
Administration Service.....	190	618.8	4	13.6	194	632.4	1	1.0
Science Service.....	1,445	5,798.7	58	179.1	1,503	5,977.8	45	152.8
Experimental Farms Service.....	1,092	3,975.0	590	1,670.8	1,682	5,645.8	316	1,148.1
Production Service.....	1,598	6,005.5	54	152.5	1,652	6,158.0	30	114.0
Marketing Service.....	966	3,572.9	3	4.8	969	3,577.7	14	29.4
Special.....	519	2,141.4	288	762.7	807	2,904.1	232	591.5
Atomic Energy Control Board	7	23.5	—	—	7	23.5	—	—
Auditor General's Office	129	593.9	—	—	129	593.9	—	—
Chief Electoral Office	17	65.4	—	—	17	65.4	—	—
Citizenship and Immigration	3,393	10,654.4	47	74.6	3,440	10,729.0	459	578.2
Departmental Administration.....	126	372.6	1	1.2	127	373.8	—	—
Citizenship.....	132	387.2	—	—	132	387.2	—	—
Immigration Branch.....	1,552	5,214.1	46	73.4	1,598	5,287.5	299	393.7
Indian Affairs Branch.....	1,549	4,561.9	—	—	1,549	4,561.9	160	184.5
National Gallery of Canada.....	34	118.6	—	—	34	118.6	—	—
Civil Service Commission	585	1,960.2	—	—	585	1,960.2	—	—
Defence Production	1,397	4,803.1	—	—	1,397	4,803.1	59	137.2
External Affairs	1,148	4,347.3	—	—	1,148	4,347.3	446	791.1
Department and Missions abroad (including Terminable Services)	1,122	4,205.6	—	—	1,122	4,205.6	446	791.1
North Atlantic Treaty Organiza- tion.....	4	37.1	—	—	4	37.1	—	—
International Joint Commission.....	22	104.6	—	—	22	104.6	—	—
Finance	4,768	14,297.5	—	—	4,768	14,297.5	106	153.3
General Administration.....	4,360	12,916.2	—	—	4,360	12,916.2	57	105.5
Administration of various Acts.....	353	1,224.4	—	—	353	1,224.4	—	—
Contingencies and miscellaneous.....	55	156.9	—	—	55	156.9	49	47.8
Fisheries	1,269	4,496.0	285	1,265.8	1,832 ²	6,619.2 ²	93	262.0
General Services.....	137	473.0	—	—	137	473.0	—	—
Field Services.....	715	2,411.4	281	1,254.1	1,248	4,455.6	41	179.4
Fisheries Research Board of Canada.....	377	1,487.0	4	7.9	394	1,532.5	39	74.4
Special.....	40	124.6	1	3.8	53	158.1	13	8.2
Governor General and Lieuten- ant-Governors	24	189.9	—	—	24	189.9	—	—
Governor General and Lieuten- ant-Governors.....	11	142.1	—	—	11	142.1	—	—
Office of the Secretary to the Governor General.....	13	47.8	—	—	13	47.8	—	—
Insurance	93	391.0	—	—	93	391.0	—	—
Justice	2,186	10,545.0	—	—	2,186	10,545.0	—	—
Department.....	547	5,272.6	—	—	547	5,272.6	—	—
Office of the Commissioner of Penitentiaries.....	1,639	5,272.4	—	—	1,639	5,272.4	—	—
Labour	7,920	22,434.9	7	13.3	7,927	22,448.2	1,425	1,437.4
General Administration.....	519	1,719.7	—	—	519	1,719.7	11	9.2
Vocational Training Co-ordina- tion.....	8	37.2	—	—	8	37.2	—	—
Government Employees Compensa- tion.....	19	61.3	—	—	19	61.3	—	—
Terminable Services.....	28	115.3	7	13.3	35	128.6	6	12.5
Unemployment Insurance Commis- sion.....	7,346	20,501.4	—	—	7,346	20,501.4	1,408	1,415.7

For footnotes, see end of table, p. 102.

3.—Federal Government Employees by Department and Principal Branch or Service as at Mar. 31, 1956, and Regular Earnings for the Year Ended Mar. 31, 1956—continued

Department and Branch or Service	Classified		Prevailing Rate		Totals		Casuals and Others	
	Em- ployees	Earnings	Em- ployees	Earnings	Em- ployees	Earnings	Em- ployees	Earnings
	No.	\$'000	No.	\$'000	No.	\$'000	No.	\$'000
Legislation.....	776	1,972.2	—	—	776	1,972.2	104	189.1
Senate.....	89	309.2	—	—	89	309.2	68	94.4
House of Commons.....	659	1,527.4	—	—	659	1,527.4	—	—
General.....	3	13.9	—	—	3	13.9	—	—
Library of Parliament.....	25	121.7	—	—	25	121.7	36	94.7
Mines and Technical Surveys....	2,192	8,131.6	111	362.6	2,349²	8,660.2²	—	—
Administration Services.....	137	476.2	3	12.5	140	488.7	—	—
Mines Branch.....	487	2,094.5	101	327.6	588	2,422.1	—	—
Geological Survey of Canada.....	380	1,436.4	3	10.3	383	1,446.7	3	3
Surveys and Mapping Branch.....	973	3,294.9	1	2.5	1,020	3,463.4	4	4
Geographical Branch.....	76	269.1	—	—	76	269.1	—	—
Dominion Observatories.....	119	475.1	3	9.7	122	484.8	—	—
Dominion Coal Board.....	20	85.4	—	—	20	85.4	—	—
National Defence.....	34,162	90,708.0	15,074	43,083.8	49,613²	134,830.1²	5,192	17,295.3
Departmental Administration...	1,051	3,333.8	—	—	1,051	3,333.8	—	—
Inspection Services.....	1,949	6,424.6	—	—	1,949	6,424.6	—	—
Navy.....	6,644	17,593.4	4,025	12,403.7	11,046	31,035.4	1,033	3,918.9
Army.....	13,233	33,053.2	6,189	17,827.8	19,422	50,881.0	2,074	7,733.1
Air.....	9,036	22,117.0	4,572	11,621.6	13,608	33,738.6	1,887	5,065.6
Defence Research and Develop- ment.....	2,244	8,165.6	288	1,230.7	2,532	9,396.3	198	577.7
General Services.....	5	20.4	—	—	5	20.4	—	—
National Film Board.....	543	2,189.4	—	—	543	2,189.4	73	106.4
National Health and Welfare....	2,932	9,334.7	681	1,072.8	3,613	10,407.5	464	684.0
Departmental Administration...	289	828.7	1	0.9	289	829.6	—	—
National Health Branch.....	1,689	5,923.4	613	994.8	2,302	6,918.2	464	684.0
Welfare Branch.....	848	2,227.2	—	—	848	2,227.2	—	—
Civil Defence.....	106	355.4	68	77.1	174	432.5	—	—
National Research Council.....	2,121	8,159.4	—	—	2,121	8,159.4	449	1,557.8
National Revenue.....	14,655	47,608.4	—	—	14,655	47,608.4	2	6.4
Customs and Excise Division...	7,233	25,281.7	—	—	7,233	25,281.7	2	6.4
Taxation Division.....	7,407	22,232.1	—	—	7,407	22,232.1	—	—
Income Tax Appeal Board.....	15	94.6	—	—	15	94.6	—	—
Northern Affairs and National Resources.....	1,509	5,313.7	638	2,779.6	2,147	8,093.3	401	753.5
Departmental Administration...	122	420.8	—	—	122	420.8	—	—
Northern Research Co-ordination Centre.....	4	11.9	—	—	4	11.9	—	—
National Parks Branch.....	495	1,476.2	482	2,325.7	977	3,801.9	306	585.2
Engineering and Water Resources Branch.....	211	954.7	1	55.4	211	1,010.1	24	79.5
Northern Administration and Lands Branch.....	301	999.3	96	161.5	397	1,160.8	65	76.7
Forestry Branch.....	295	1,222.8	60	237.0	355	1,459.8	5	8.4
Canadian Government Travel Bureau.....	81	228.0	—	—	81	228.0	1	3.7
Post Office.....	21,827	64,125.5	—	—	21,827	64,125.5	—	—
Departmental Administration...	262	953.1	—	—	262	953.1	—	—
Operations.....	21,047 ³	61,584.4 ³	—	—	21,047	61,584.4	6	6
Transportation.....	98	352.2	—	—	98	352.2	—	—
Financial Services.....	420	1,235.8	—	—	420	1,235.8	—	—
Privy Council.....	91	338.5	—	—	91	338.5	—	—
Privy Council Office.....	84	324.6	—	—	84	324.6	—	—
Prime Minister's residence.....	7	13.9	—	—	7	13.9	—	—

For footnotes, see end of table, p. 102.

3.—Federal Government Employees by Department and Principal Branch or Service as at Mar. 31, 1956, and Regular Earnings for the Year Ended Mar. 31, 1956—concluded

Department and Branch or Service	Classified		Prevailing Rate		Totals		Casuals and Others	
	Em- ployees	Earnings	Em- ployees	Earnings	Em- ployees	Earnings	Em- ployees	Earnings
	No.	\$'000	No.	\$'000	No.	\$'000	No.	\$'000
Public Archives and National Library	95	330.3	—	—	95	330.3	4	7.7
Public Archives.....	66	240.6	—	—	66	240.6	4	7.7
National Library.....	29	89.7	—	—	29	89.7	—	—
Public Printing and Stationery ..	478	1,530.1	975	3,528.8	1,453	5,058.9	—	—
Public Works	4,653	12,515.8	2,204	3,255.4	7,014 ²	16,808.2 ²	704	2,272.0
Departmental Administration and Fire Prevention.....	267	804.7	—	—	267	804.7	—	—
Property and Building Management Branch.....	3,514	7,012.4	2,194	3,131.0	5,708	10,143.4	80	411.1
Building Construction Branch.....	241	2,127.8	—	—	241	2,127.8	—	—
Harbours and Rivers Engineering Branch.....	472	2,063.1	10	124.4	639	3,224.5	624	1,860.9
Development Engineering Branch.....	159	507.8	—	—	159	507.8	—	—
Royal Canadian Mounted Police	5,757	19,604.0	—	—	5,757	19,604.0	475	1,292.
Headquarters Administration and Training Establishments..	887	2,143.5	—	—	887	2,143.5	—	—
Force.....	4,870	17,460.5	—	—	4,870	17,460.5	475	1,292.0
Secretary of State	592	2,172.5	—	—	592	2,172.5	—	—
Trade and Commerce	3,326	11,137.2	—	—	3,326	11,137.2	339	615.5
General Administration.....	505	2,210.2	—	—	505	2,210.2	290	513.8
Exhibitions.....	31	168.6	—	—	31	168.6	—	—
Standards Branch.....	340	1,228.2	—	—	340	1,228.2	—	—
Dominion Bureau of Statistics...	1,438	4,105.0	—	—	1,438	4,105.0	—	—
Canada Grain Act.....	985	3,351.3	—	—	985	3,351.3	49	101.7
Special.....	27	73.9	—	—	27	73.9	—	—
Transport	9,158	26,912.5	1,085	3,291.9	11,313 ²	33,432.6 ²	853	1,915.3
Departmental Administration...	488	1,575.6	—	—	488	1,575.6	—	—
Canal Services.....	1,073	3,198.7	431	1,349.8	1,542	4,662.0	390	659.9
Marine Services.....	1,926	3,646.6	234	658.3	3,192	7,419.6	120	188.9
Railway and Steamship Services.	7	20.1	—	—	7	20.1	—	—
Air Services.....	5,449	17,381.6	420	1,283.8	5,869	18,665.4	343	1,066.5
Air Transport Board.....	46	192.3	—	—	46	192.3	—	—
Board of Transport Commissioners for Canada.....	144	775.3	—	—	144	775.3	—	—
Canadian Maritime Commission.	25	122.3	—	—	25	122.3	—	—
Veterans Affairs	11,470	35,890.3	1,420	2,196.0	12,890	38,086.3	15	23.7
Departmental Administration...	621	1,817.1	2	6.9	623	1,824.0	—	—
District Services Administration	666	1,903.9	—	—	666	1,903.9	9	13.2
Veterans Welfare Services.....	805	2,865.1	—	—	805	2,865.1	3	6.3
Treatment Services.....	7,646	22,489.7	1,418	2,189.1	9,064	24,678.8	1	2.1
Prosthetic Services.....	214	702.5	—	—	214	702.5	—	—
Veterans Bureau.....	153	522.5	—	—	153	522.5	—	—
War Veterans Allowance Board Administration.....	30	132.8	—	—	30	132.8	—	—
Veterans Insurance.....	20	64.8	—	—	20	64.8	—	—
Canadian Pension Commission..	412	1,741.2	—	—	412	1,741.2	2	2.1
Soldier Settlement and Veterans' Land Act.....	903	3,650.7	—	—	903	3,650.7	—	—
Grand Totals	145,083	444,888.5	23,524	63,708.1	170,535	514,923.5	12,300	32,114.7

¹ No employment at year end.² Totals and items under this heading include ships' officers and crews.³ Excludes field parties with reported earnings of \$128,039.⁴ Excludes field parties with reported earnings of \$322,448.⁵ Excludes employees of Post Offices with revenues of less than \$20,000 which reported 13,930 employees for the month of March 1956 and earnings of \$17,983,178 during the year.⁶ Excluding 40,357 casual employees with earnings of \$2,333,765 employed for the Christmas rush.

4.—Employees and Earnings in Agency and Proprietary Corporations and Other Quasi-Independent Government Bodies of the Federal Government by Month, Years Ended Mar. 31, 1955 and 1956.

NOTE.—Figures for 1952-53 are given at p. 119 of the 1955 Year Book and for 1953-54 at p. 132 of the 1956 Year Book.

Month	1954-55		1955-56	
	Employees	Earnings	Employees	Earnings
	No.	\$	No.	\$
April.....	139,528	38,881,847	136,852	39,049,419
May.....	142,408	38,106,684	140,798	38,930,267
June.....	145,434	40,074,807	143,795	39,879,095
July.....	148,613	40,338,784	146,808	41,962,332
August.....	149,196	39,964,936	148,181	41,595,838
September.....	148,099	40,317,161	146,726	41,962,779
October.....	145,592	40,270,554	145,186	40,210,292
November.....	143,767	40,007,899	144,668	40,809,760
December.....	141,950	39,376,178	144,042	41,459,743
January.....	140,610	37,662,611	143,269	39,568,781
February.....	138,175	39,011,119	146,404	41,716,655
March.....	137,648	38,471,774	145,717	41,951,599

PART V.—CANADA'S EXTERNAL RELATIONS

The growth of Canada's international status is reflected in the development of the Department of External Affairs. A review of the organization and development of that Department is given in the 1952-53 Year Book, pp. 101-104.

Section 1.—Diplomatic Representation as at May 15, 1957

NOTE.—Changes in this listing subsequent to May 15, 1957 and names of current Representatives are given in *Canadian Representatives Abroad and Representatives of Other Countries in Canada*, published quarterly and obtainable from the Queen's Printer, Ottawa, price 25 cents.

1.—Canadian Representation Abroad

Country and Year Representation Established	Present Status of Representative	Address
Argentina.....1941	Ambassador.....	Bartolomé Mitre, 478, Buenos Aires
Australia.....1939	High Commissioner.....	State Circle, Canberra
Austria.....1952	Ambassador.....	Karntnerring 5, Vienna
Belgium.....1939	Ambassador.....	35, rue de la Science, Brussels
Brazil.....1941	Ambassador.....	Avenida Presidente Wilson, 165, Rio de Janeiro
Ceylon.....1953	High Commissioner.....	6 Gregory's Road, Cinnamon Gardens, Colombo
Chile.....1942	Ambassador.....	Avenida General Bulnes 129, Santiago
Colombia.....1953	Ambassador.....	Rm. 613 Edificio Henry Faux, Avenida Jimenez de Quesada 7-25, Bogota
Cuba.....1945	Ambassador.....	7(A) Avenida No. 21404 Reparto Biltmore, Marianao, Havana
Czechoslovakia.....1943	Chargé d'Affaires <i>ad interim</i>	Krakovská 22, Prague, 2
Denmark.....1946	Ambassador.....	4 Trondhjems Plads, Copenhagen
Dominican Republic.....1954	Ambassador.....	410 Calle El Conde, Ciudad Trujillo
Egypt.....1954	Ambassador.....	6, Sharia Rustom, Garden City, Cairo
Finland.....1949	Minister.....	Borgmastarbrinken C-3. 32, Helsinki
France.....1928	Ambassador.....	72 avenue Foch, Paris xvi
Germany.....1950	Ambassador.....	Zitelmannstrasse 22, Bonn
Greece.....1943	Ambassador.....	31, avenue Vassilissis Sofias, Athens
Haiti.....1954	Ambassador.....	Route du Canape Vert, St. Louis de Turgeau, Port-au-Prince
Iceland.....1949	Minister.....	c/o Canadian Embassy, Fridtjof Nansens
India.....1947	High Commissioner.....	Plass 5, Oslo, Norway
		4 Aurangzeb Road, New Delhi

1.—Canadian Representation Abroad—concluded

Country and Year Representation Established	Present Status of Representative	Address
Indonesia.....1953	Ambassador.....	Djalan Budi Kemuliaan No. 6, Djakarta
Ireland.....1940	Ambassador.....	92 Merrion Square West, Dublin
Israel.....1954	Ambassador.....	Farmers' Bldg., 8 Rehov Hakirya, Tel Aviv
Italy.....1947	Ambassador.....	Via G. B. de Rossi, 27, Rome
Japan.....1929	Ambassador.....	16 Omote - Machi, 3 - Chome, Akasaka Minato-ku, Tokyo
Lebanon.....1954	Minister.....	Immeuble Alpha, rue Clemenceau, Beirut
Luxembourg.....1945	Minister.....	c/o Canadian Embassy, 35, rue de la Science Brussels, Belgium
Mexico.....1944	Ambassador.....	Edificio Internacional, Paseo de la Reforma, No. 1, Mexico City
Netherlands.....1939	Ambassador.....	5 and 7 Sophialaan, The Hague
New Zealand.....1940	High Commissioner.....	Government Life Insurance Bldg., Custom-house Quay, C.I., Wellington
Norway.....1943	Ambassador.....	Fridtjof Nansens Plass 5, Oslo
Pakistan.....1950	High Commissioner.....	Metropole Hotel, Victoria Road, Karachi
Peru.....1944	Ambassador.....	Edificio Boza, Plaza San Martin, Lima
Poland.....1943	Chargé d'Affaires <i>ad interim</i>	31 Ulica Katowicka, Saska Kępa, Warsaw
Portugal.....1952	Ambassador.....	Rua de Buenos Aires No. 1, Lisbon
Spain.....1953	Ambassador.....	Edificio España, Plaza de España 2, Madrid
Sweden.....1947	Ambassador.....	Strandvagon 7-C, Stockholm
Switzerland.....1947	Ambassador.....	88 Kirchenfeldstrasse, Berne
Turkey.....1947	Ambassador.....	Mudafaa-i Huduk Caddesi, No. 19, Cankaya, Ankara
Union of South Africa.....1940	High Commissioner.....	Kerry Bldg., 238 Vermeulen St., Pretoria
Union of Soviet Socialist Republics.....1943	Ambassador.....	23 Starokonyushenny Pereulok, Moscow
United Kingdom.....1880	High Commissioner.....	Canada House, Trafalgar Square, London, S.W. 1
United States of America.....1927	Ambassador.....	1746 Massachusetts Avenue, N. Washington, D.C.
Uruguay.....1952	Ambassador.....	1409 Avenida Agraciada, Piso 7°, Montevideo
Venezuela.....1952	Ambassador.....	Edificio Pan-American, Puente Urapal Candelaria, Caracas
Yugoslavia.....1943	Ambassador.....	Proleterskih Brigada 69, Belgrade
Other Missions		
Canadian Military Mission (1946)...	Head of Mission.....	Perthshire Block, Olympic Stadium, Headquarters Berlin, (British Sector)
Canadian Delegation to the North Atlantic Council (1952) and Organization for European Economic Co-operation (1950).....	Representative.....	77, rue d'Auteuil, Paris xvi
Permanent Delegation of Canada to the United Nations (1948)....	Permanent Representative.....	Rm. 504, 620 Fifth Ave., New York 20, N.Y.
Permanent Delegation of Canada to European Office of the United Nations (1948).....	Permanent Representative.....	16, Parc du Chateau Banquet, Geneva
Consulates		
Brazil.....1947	Consul.....	Rua 7 de Abril 252, São Paulo
Germany.....1956	Consul.....	Ferdinandstrasse 69, Hamburg
Republic of the Philippines.....1949	Consul General.....	Ayala Bldg., Juan Luna St., Manila
United States of America.....1948	Consul General.....	532 Little Bldg., 80 Boylston St., Boston 16, Mass.
".....1947	Consul General.....	Suite 1412, Garland Bldg., 111 North Wabash Ave., Chicago, Ill.
".....1948	Consul.....	1035 Penobscot Bldg., Detroit 26, Mich.
".....1953	Consul General.....	Associated Realty Bldg., Los Angeles 14, Cal.
".....1952	Consul General.....	215 International Trade Mart, New Orleans 12, La.
".....1943	Consul General.....	620 Fifth Ave., New York, N.Y.
".....1947	Honorary Vice-Consul.....	443 Congress St., Portland, Maine
".....1948	Consul General.....	400 Montgomery St., San Francisco 4, Cal.
".....1953	Consul General.....	1407 Tower Bldg., 7th Ave. at Olive Way Seattle 1, Wash.

2.—Representation of Other Countries in Canada

Country and Year Representation Established	Present Status of Representative	Address
Argentina.....1941	Ambassador.....	211 Stewart Street, Ottawa
Australia.....1940	High Commissioner.....	100 Sparks Street, Ottawa
Austria.....1952	Minister.....	445 Wilbrod Street, Ottawa
Belgium.....1937	Ambassador.....	168 Laurier Avenue East, Ottawa
Brazil.....1941	Ambassador.....	305 Stewart Street, Ottawa
Ceylon.....1957	High Commissioner.....	Beacon Arms, Ottawa
Chile.....1942	Ambassador.....	Suite 215, 56 Sparks Street, Ottawa
China.....1942	Ambassador.....	201 Wurttemberg Street, Ottawa
Colombia.....1953	Ambassador.....	Apt. 29, The Roxborough, Ottawa
Cuba.....1945	Ambassador.....	690 Island Park Drive, Ottawa
Czechoslovakia.....1942	Minister.....	171 Clemow Avenue, Ottawa
Denmark.....1946	Ambassador.....	451 Daly Avenue, Ottawa
Dominican Republic.....1954	Ambassador.....	190 Buena Vista Road, Rockcliffe Park, Ont.
Egypt.....1954	Ambassador.....	The Roxborough, Ottawa
Finland.....1948	Chargé d'Affaires.....	140 Wellington Street, Ottawa
France.....1928	Ambassador.....	42 Sussex Street, Ottawa
Germany.....1951	Ambassador.....	580-582 Chapel Street, Ottawa
Greece.....1942	Ambassador.....	Chateau Laurier Hotel, Ottawa
Haiti.....1954	Ambassador.....	Suite 6, 130 Sparks Street, Ottawa
Iceland.....1948	Minister.....	Chateau Laurier Hotel, Ottawa
India.....1947	High Commissioner.....	200 MacLaren Street, Ottawa
Indonesia.....1953	Ambassador.....	275 MacLaren Street, Ottawa
Iran.....1956	Minister.....	The Roxborough, Ottawa
Ireland.....1939	Ambassador.....	140 Wellington Street, Ottawa
Israel.....1953	Ambassador.....	45 Powell Avenue, Ottawa
Italy.....1947	Ambassador.....	172 MacLaren Street, Ottawa
Japan.....1928	Ambassador.....	88 Metcalfe Street, Ottawa
Lebanon.....1955	Minister.....	470 Wilbrod Street, Ottawa
Luxembourg.....1950	Minister.....	Chateau Laurier Hotel, Ottawa
Mexico.....1944	Ambassador.....	88 Metcalfe Street, Ottawa
Netherlands.....1939	Ambassador.....	12 Marlborough Avenue, Ottawa
New Zealand.....1942	High Commissioner.....	77 Metcalfe Street, Ottawa
Norway.....1942	Ambassador.....	140 Wellington Street, Ottawa
Pakistan.....1949	High Commissioner.....	505 Wilbrod Street, Ottawa
Peru.....1944	Ambassador.....	539 Island Park Drive, Ottawa
Poland.....1942	Chargé d'Affaires <i>ad interim</i>	10 Range Road, Ottawa
Portugal.....1952	Ambassador.....	285 Harmer Avenue, Ottawa
Spain.....1953	Ambassador.....	149 Daly Avenue, Ottawa
Sweden.....1943	Ambassador.....	720 Manor Road, Rockcliffe Park, Ont.
Switzerland.....1946	Ambassador.....	5 Marlborough Avenue, Ottawa
Turkey.....1944	Ambassador.....	197 Wurttemberg Street, Ottawa
Union of South Africa.....1938	High Commissioner.....	9 Rideau Gate, Ottawa
Union of Soviet Socialist Republics.....1942	Ambassador.....	285 Charlotte Street, Ottawa
United Kingdom.....1928	High Commissioner.....	Earncliffe, Ottawa
United States of America.....1927	Ambassador.....	100 Wellington Street, Ottawa
Uruguay.....1948	Chargé d'Affaires <i>ad interim</i>	The Roxborough, Ottawa
Venezuela.....1953	Ambassador.....	The Roxborough, Ottawa
Yugoslavia.....1942	Ambassador.....	17 Blackburn Avenue, Ottawa

Section 2.—International Activities*

Subsection 1.—Canada and Commonwealth Relations 1955-57

Close and friendly consultation, long the symbol of Commonwealth association, continued during the period under review, June 1, 1955 to Apr. 30, 1957. Though 1956 was in certain respects a critical year, the differences of policy revealed over the Suez issue between the United Kingdom and certain of its Commonwealth colleagues were followed by a very real desire to remove the causes of these differences. Canada and the United Kingdom worked closely together throughout the year and, in unpectacular but vital day-to-day relations, continued that frank and friendly consultation which is the life blood of the Commonwealth connection. Not only at the Prime Ministers' Meeting, but in the United Nations, in Colombo Plan matters, at NATO conferences, and in such official

*Prepared by the Department of External Affairs.

bodies as the United Kingdom-Canada Continuing Committee on Trade and Economic Affairs, the ties existing between Canada and the senior member of the Commonwealth were daily strengthened and maintained.

In June and July 1956, a Meeting of Commonwealth Prime Ministers was held in London under the chairmanship of Sir Anthony Eden. Sir Anthony, Mr. Strijdom of South Africa, Mr. Mohamad Ali of Pakistan, and Mr. Bandaranaike of Ceylon, attended as Prime Ministers for the first time. Noting the growing recognition of the devastating power of thermo-nuclear weapons, the Prime Ministers agreed that the peaceful use of nuclear energy constitutes a valuable new sphere for co-operation within the Commonwealth as well as with other countries. The Prime Ministers went on to review significant developments in the Soviet Union and relate them to the context of international relations and world affairs. In acknowledging Ceylon's statement of intent to become a republic, the Prime Ministers accepted and recognized its continuing membership in the Commonwealth.

In November and December 1956, the Hon. Paul Martin, then Minister of National Health and Welfare, carried out a goodwill tour of Asia *en route* to and from the meetings of the Colombo Plan Consultative Committee in Wellington, New Zealand, at which he was Chairman of the Canadian Delegation. The tour included Australia and Asiatic countries including India, Pakistan and Ceylon where he inspected Canadian Colombo Plan projects.

During 1956, Ottawa welcomed many prominent Commonwealth statesmen including the Prime Minister, the Foreign Secretary and the Secretary of State for Commonwealth Relations of the United Kingdom; the Prime Minister, the Minister for External Affairs and the Minister of Trade of Australia; the Prime Minister of New Zealand; the Prime Minister of Ceylon; the Prime Minister of India; the Premier and the Minister of Education of Western Nigeria; the Minister of Labour of Jamaica; and the Premier of the Australian State of Victoria. In addition, the Deputy Prime Minister and the Minister of Finance of the Federation of Rhodesia and Nyasaland, and the Minister of National Resources of India came to Ottawa to discuss problems of common interest with Canadian Government leaders and officials.

Severe flooding occurred in several sections of India and Pakistan in July and August 1956. In August the Canadian Government authorized a gift to Pakistan of 25,000 tons of Canadian No. 4 wheat valued at \$1,500,000, a gift separate and distinct from Colombo Plan contributions. The Canadian Red Cross gave India flood relief supplies valued at \$25,000. Emergency assistance in the form of \$50,000 worth of wheat flour was sent to relieve hurricane victims in the British West Indies. In addition, \$50,000 worth of relief supplies was provided by the West Indies Hurricane Relief Fund, sponsored jointly by the Canadian Exporters Association and the Canadian Red Cross.

At the Eleventh Session of the United Nations General Assembly the Delegation of the Union of South Africa announced that, in view of the Assembly's continuing insistence on discussing matters which were within the internal jurisdiction of the Government of South Africa, the South African Permanent Representative to the United Nations would be withdrawn and that South Africa would, in future, maintain only token representation at the United Nations.

On Mar. 23, 1956, the Republic of Pakistan was proclaimed. This had been forecast at the Prime Ministers' Meeting of January 1955 at which the Prime Ministers had accepted and recognized Pakistan's continuing membership in the Commonwealth after it became a republic. Canada sent its Ambassador to Tokyo, Mr. T. C. Davis, as special envoy to the inauguration ceremonies in Karachi.

The period was marked by a series of steps leading to the eventual granting of independence to certain United Kingdom dependent territories. On Feb. 8, negotiations between the United Kingdom and representatives of Malaya were successfully concluded with the signing of an agreement to cover the transfer of full sovereignty to the Government of the

Federation, with Aug. 31, 1957, set as the date for full independence "if possible". Negotiations conducted at London in March 1957 resulted in agreement on complete internal autonomy for the State of Singapore, with the United Kingdom remaining responsible for its foreign relations and defence.

A bill granting independence to Ghana was passed by the United Kingdom Parliament in February 1957. The granting of independence on Mar. 6, 1957, was marked by extensive celebrations in Accra, at which Canada was represented by the Hon. George Prudham, then Minister of Mines and Technical Surveys. On the same day Canada's then Prime Minister, in a statement in the House of Commons, welcomed Ghana's entry into the Commonwealth as a fully independent nation and announced that Canada would open a diplomatic mission in Accra and appoint a Canadian High Commissioner as soon as it was possible to do so. Ghana became a member of the United Nations on Mar. 8, its application for membership being sponsored by Australia, Canada, Ceylon, India, New Zealand, Pakistan and the United Kingdom.

Delegations from Jamaica, the Leeward Islands, Barbados, the Windward Islands and Trinidad, and observers from British Guiana and British Honduras discussed a proposed Caribbean Federation with the United Kingdom Government at London in February 1956. On Aug. 2 the Queen gave assent to enabling legislation for the establishment of the Federation. Lord Hailes has been appointed the first Governor General and Commander-in-Chief of the West Indies.

The United Kingdom Government reaffirmed its intention to grant internal self-government to any region in Nigeria which desired it. In March 1957 the Legislative Assembly of the Federation of Nigeria passed a unanimous resolution requesting the Federation's independence within the Commonwealth in 1959. A constitutional conference was slated to be held in London at the end of May 1957.

During the review period, changes of government took place in a number of Commonwealth countries. At elections held in April 1956 in Ceylon a coalition of parties headed by Mr. S. W. R. D. Bandaranaike defeated Sir John Kotelawala's United National party. In September, following political disputes between the two wings of the country, Mr. Mohamad Ali resigned as Prime Minister of Pakistan and was succeeded by Mr. H. S. Suhrawardy. The Prime Minister of the United Kingdom, Sir Anthony Eden, resigned because of ill health in January 1957 and was succeeded by Mr. Harold Macmillan. In India a general election, the second since Independence, was held in March and April 1957. Since the first general election the number of States had been reduced and the borders of the new ones redrawn on linguistic lines. The Congress Party secured another impressive victory at the polls, increasing its share of the popular vote from 45 p.c. to 48 p.c., although it gained only one additional seat in the Lok Sabha (House of the People).

The Prime Ministers of the United Kingdom and Canada met in Bermuda on Mar. 25 and 26, 1957, immediately following a meeting between Prime Minister Macmillan of the United Kingdom and President Eisenhower of the United States. Discussions were held on topics of concern to both countries, including the Middle East situation, relations between the United Kingdom and Europe and Canadian-United Kingdom trade.

It was announced on Apr. 17, 1957, that a meeting of the Commonwealth Prime Ministers would be held at London on June 26, 1957.

Subsection 2.—Canada and the United Nations

The period June 1, 1955, to Apr. 30, 1957, was perhaps the most difficult experienced by the United Nations in the eleven years of its existence. There was no war but there was no tranquillity in the world and, since the United Nations is a reflection of the world as it exists, these strains and quarrels were mirrored in the United Nations. Nevertheless, the United Nations continued to make progress on many fronts in its efforts to safeguard peace and advance the economic and social welfare of all peoples through international co-operation. Canada has continued to play an active role in United Nations affairs.

During this period, Canada continued to be represented in the Middle East on the United Nations Truce Supervision Organization (UNTSO). Major-General E. L. M. Burns of Canada served as Chief of Staff for UNTSO from August 1954 until November 1956 when the United Nations Emergency Force (UNEF) was established and Major-General Burns became its Commander. Canada continued to provide observers also for service in Kashmir with the United Nations Military Observer Group (UNMOG). By the end of the period under review the Canadian Government had also provided more than 1,000 Army and RCAF personnel for service with UNEF, the total strength of which was about 6,000 men representing contingents from ten countries—Brazil, Canada, Colombia, Denmark, Finland, India, Indonesia, Norway, Sweden and Yugoslavia. Continuation of the armistice in Korea permitted the withdrawal of Canadian military forces and by Apr. 30, 1957, only a small Canadian medical detachment numbering thirty officers and men remained in this former theatre of hostilities.

Developments in important United Nations bodies during the review period are summarized below.

General Assembly.—The tenth session of the General Assembly was held in New York from Sept. 20 to Dec. 20, 1955, under the presidency of Sr. José Maza of Chile. The then Minister of National Health and Welfare, Hon. Paul Martin, was Chairman of the Canadian Delegation. The General Assembly held its first emergency special session from Nov. 1 to 10, 1956, and its second emergency special session from Nov. 4 to 10, 1956. The Canadian Representatives at these two emergency sessions were the Hon. L. B. Pearson, then Secretary of State for External Affairs and Dr. R. A. Mackay, Permanent Representative of Canada to the United Nations. The eleventh session of the General Assembly was held from Nov. 12, 1956, to Mar. 8, 1957; the Hon. L. B. Pearson was Chairman of the Canadian Delegation which attended this session.

The most notable developments during the tenth session were concerned with the admission of sixteen new members to the United Nations, and with disarmament and atomic energy. After a deadlock of nearly ten years, broken only occasionally by the admission of a very few mutually acceptable candidates, the General Assembly finally enlarged its membership from sixty to seventy-six nations and became, as it was originally intended to be, very largely representative of the entire world. The Canadian Delegation contributed substantially to this result by taking the initiative in attempting to break the deadlock over United Nations membership. The developments on disarmament were disappointingly inconclusive at the tenth session after the hopes raised the year before. After the failure of the Conference of Foreign Ministers in November 1955, the General Assembly passed a resolution on disarmament by a large majority, but there was no great enthusiasm and little sense of achievement since the short-lived unanimity of the ninth session could not be recaptured. However, a significant contribution to the tenth session was the unanimous approval of the resolutions on peaceful uses of atomic energy and on the effects of atomic radiation. On another issue, the Arab-Israeli dispute, there was no compromise during the tenth session and there was a prolonged and bitter exchange of accusation encompassing every aspect of the Palestine impasse. The representation of China at the United Nations remained unchanged after the tenth and eleventh sessions of the General Assembly. While there was majority support for the contention that no change in that representation should take place and that a representative of the Nationalist Government of China should continue to hold the seat, resolutions were introduced and pressure increased at the General Assembly in support of the view that a representative of the People's Republic of China should speak for China.

The two emergency sessions and the regular eleventh session of the General Assembly held between Nov. 1, 1956 and Mar. 8, 1957, provided the Canadian Delegation with grounds for satisfaction as well as for apprehension. Five new members were admitted—Ghana, Japan, Morocco, Sudan and Tunisia—bringing the membership of the United Nations to eighty-one countries. The most crucial issues considered were those of Hungary and the Middle East. The difficulties in the Middle East following the seizure of the Suez

Canal in the summer of 1956 and the Soviet armed intervention in Hungary confronted the United Nations with its most serious crises since the Korean War. The General Assembly took action, particularly by establishing the United Nations Emergency Force, to secure the ceasefire in the Middle East and the withdrawal of Israeli, French and United Kingdom troops. The Hungarian uprising began on Oct. 23, 1956. The General Assembly called on the Soviet Union to withdraw its forces from Hungary, but this request met with no success since neither the Soviet Union nor the Kadar Government in Hungary was willing to comply with the resolutions of the United Nations. Neither was the Secretary-General of the United Nations nor his observers allowed to enter Hungary to investigate the circumstances of the uprising. No concrete results had developed from the disarmament negotiations by April 1957.

Security Council.—Canada was not a member of the Security Council during this period. The source of chief concern to the Council continued to be the threat of hostilities between Israel and its Middle Eastern neighbours. Increasingly grave crises were occurring between Israel and three of its four Arab neighbours. Israel was unanimously condemned by the Security Council on Jan. 19, 1956, for what was called a flagrant violation of the 1948 ceasefire when it replied to a Syrian shooting incident on Lake Tiberias by mounting a large-scale military raid against Syrian positions. The Secretary-General of the United Nations visited the region on a number of occasions and endeavoured to arrange measures which would reduce the existing tensions. Then on Apr. 5, 1956, Gaza was shelled by the Israelis and hostilities were halted only by the intervention of the United Nations Truce Supervision Organization. However, reprisals continued for some weeks by Egyptian-trained fedayeen against Israel because of the shelling of Gaza. In September and October 1956 there was again a sharp increase in violence on the Jordan-Israel border. In mid-October Jordan appealed to the Security Council, and the Council was considering this appeal when, on Oct. 29, Israeli forces invaded Egypt. Earlier, on Sept. 26, 1956, the Security Council began to study the Suez Canal question and by mid-October had achieved unanimous agreement on six principles which should govern the settlement of the Suez Canal dispute. Immediately after Israel launched its attack against Egypt on Oct. 29, followed on Oct. 30 by the twelve-hour notice from the Governments of the United Kingdom and France that their forces would intervene, the Security Council met and called for the withdrawal of Israel's forces behind the armistice line and requested other countries to give no assistance to Israel. This Security Council proposal was vetoed by France and the United Kingdom. Because of this lack of unanimity among the Council's permanent members, there was invoked for the first time the General Assembly's 1950 "Uniting for Peace" resolution and the problem of the Middle East hostilities was referred to the General Assembly.

Among other matters of importance considered by the Security Council during the period under review were the admission of new members to the United Nations, the Kashmir dispute submitted by Pakistan against India, and the proposal to call a general conference of United Nations' members for the purpose of reviewing the Charter.

Economic and Social Council (ECOSOC).—Canada began serving its third three-year term of office on the Economic and Social Council on Jan. 1, 1956. Canada's previous years of service were from 1946-48 and again from 1950-52. In the period reviewed by this article the Council held its twentieth, twenty-first, twenty-second and twenty-third sessions. As of the end of April 1957 Canada was a member of four of ECOSOC's eight functional commissions—Population, Statistical, Narcotic Drugs and International Commodity Trade.

Ever since the United Nations was established, its ten Specialized Agencies have been the chief instruments through which member states have pooled their efforts in trying to achieve the goals of higher standards of living, full employment and conditions of economic and social progress. Canada is a member of all the United Nations Specialized

Agencies and has tried to encourage and develop their programs.* The responsibilities which the Specialized Agencies have assumed are so vast, and the opportunities for useful work so numerous, that great difficulty has been experienced in setting limits to and priorities for their programs. Canada has endeavoured to have the programs of the Specialized Agencies planned according to a system of priorities and has encouraged the Agencies to demonstrate techniques, give guidance and generally stimulate national efforts rather than engage themselves in direct operations. In July 1956 the International Finance Corporation (IFC) came into being as an affiliate of one of the Specialized Agencies (the International Bank for Reconstruction and Development). Canada had become a member of the IFC in October 1955 and at that time had purchased shares to the value of \$3,600,000. The actual establishment of IFC in July 1956 was the result of thirty countries subscribing the necessary funds in order to promote investment of capital in private enterprise in under-developed countries.

ECOSOC gave further consideration to the possibility of establishing a Special United Nations Fund for Economic Development (SUNFED) which would provide grants and long-term low interest loans to help the governments of under-developed countries strengthen their economies.

The United Nations and its Specialized Agencies have undertaken for many years special programs of assistance to overcome certain acute problems and serious deficiencies which exist in various areas. Since money for these special programs is not available through the regular United Nations budget or through the regular budgets of the Specialized Agencies (these regular budgets are raised by assessing all member States using a scale of assessment which is based mainly on the yardstick of gross national product), it must be raised from voluntary contributions made by member States. At the present time the United Nations is sponsoring five special programs: the United Nations Expanded Programme of Technical Assistance (ETAP); the United Nations Children's Fund (UNICEF); the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA); the United Nations Refugee Fund (UNREF); and Aid for Korea (UNKRA)—which is expected to be wound up by 1958. Canada has made substantial contributions to these five programs and pledged to contribute, in 1956, \$650,000 to UNICEF, \$500,000 to UNRWA, \$125,000 to UNREF and \$1,800,000 to ETAP. For 1957, Canada pledged to contribute \$650,000 to UNICEF, \$750,000 to UNRWA, \$200,000 to UNREF and \$2,000,000 to ETAP.

In addition to these voluntary contributions, Canada paid an annual assessment to the United Nations as well as an assessment to each of the ten Specialized Agencies totalling about \$1,400,000 for 1956. Canada's share of the United Nations normal administrative budget for 1956 was at the rate of 3.63 p.c., or \$1,600,000.

Trusteeship Council.—During the period under review, the Trusteeship Council held five sessions—its regular sixteenth, seventeenth and eighteenth sessions as well as a special session at the end of 1955 and another special session in December 1956. Canada has not yet been elected to membership on the Trusteeship Council. As of the end of April 1957, the membership of the Trusteeship Council consisted of the seven States which administer trust territories (Australia, Belgium, France, Italy, New Zealand, United Kingdom, United States) and an equal number of non-administering States; always included in the latter group are the two permanent members of the Security Council, the U.S.S.R. and China, which do not administer trust territories. At the end of April 1957 the other five non-administering countries on the Trusteeship Council were Burma, Guatemala, Haiti, India and Syria.

During the period under review, the most outstanding development was the ending of the trusteeship of United Kingdom-administered Togoland. This territory voted on May 9, 1956, to enter into a union with the Gold Coast which became the independent state of Ghana on Mar. 6, 1957. The trust territory of Eastern Togoland under French

* Canada's activities in connection with three of these Specialized Agencies—United Nations Educational, Scientific and Cultural Organization, Food and Agricultural Organization and International Labour Organization are dealt with elsewhere in this volume. See Index.

administration made satisfactory political advances during the period, and a six-nation commission, to which Canada will provide a member, will visit the territory in the summer of 1957 to examine the practical operation of its new constitution and of the institutions established under it. In the review period, United Nations missions visited trust territories in the Pacific which are administered by Australia, New Zealand and the United States. Canadian policy on trusteeship matters before the General Assembly is governed by a careful weighing, within the provisions of the United Nations Charter, of the responsibilities, rights and aspirations of both the administering states and the indigenous populations.

International Court of Justice.—To “adjust and settle international disputes in conformity with Justice and International Law” is one of the purposes of the United Nations and it was therefore essential to establish a judicial arm for the Organization. The Statute of the International Court of Justice is an integral part of the Charter of the United Nations. All members of the United Nations are *ipso facto* parties to the Statute of the Court. A state which is not a member of the United Nations may, nevertheless, become a party to the Statute of the Court on conditions to be determined in each case by the General Assembly upon the recommendation of the Security Council. Thus, at the moment, the total number of parties to the Statute is 85—81 members of the United Nations and 4 non-members (Liechtenstein, San Marino, Switzerland and the Federal Republic of Germany). The Court is composed of 15 judges who are elected in individual capacities. Judge John E. Read of Canada was elected to the Court in 1946 and again in 1949. His present term of office expires in 1958.

Subsection 3.—Canada and the North Atlantic Treaty

Within less than two years of the end of World War II in 1945 and the establishment of the United Nations hopes of a lasting peace gave place to growing anxiety. The United Nations Security Council, which had been given responsibility for maintaining world-wide security, was deliberately prevented by the U.S.S.R. representatives from fulfilling this function. The Soviet Union maintained its armed forces after the War at a level that insured to itself a preponderance of military strength in Europe. The Soviet Government blocked attempts by the Western Powers to reach a peace settlement in Europe and communist parties were used as an instrument of Soviet policy to sabotage Western European efforts at economic recovery and political co-operation. Under these circumstances, the countries of the Atlantic community felt themselves in grave peril of Soviet aggression and communist subversion and therefore took special collective measures under the United Nations Charter to maintain peace.

The first step in this direction was taken in the spring of 1948 when Belgium, France, Luxembourg, the Netherlands and the United Kingdom signed the Brussels Treaty establishing Western Union. On Apr. 4, 1949, as a result of negotiations between these countries and Canada and the United States, the North Atlantic Treaty was signed at Washington, D.C. This Treaty was accepted by all major groups of opinion in Canada and was passed without a single dissenting vote in Parliament.

The original signatories of the Treaty were Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom and the United States. In September 1951 it was agreed that Greece and Turkey should be invited to accede to the Treaty and they were admitted in February 1952. In October 1954 a protocol to the North Atlantic Treaty inviting the Federal Republic of Germany to join NATO was approved together with related arrangements which provided for the establishment of a Western European Union (composed of the Brussels Powers, the Federal Republic of Germany and Italy) and for the restoration of full sovereignty to the Federal Republic of Germany. These measures, designed to bring the Federal Republic of Germany into close and enduring association with the Atlantic Community of free nations, were adopted following the failure of the European Defence Community Treaty which was

rejected by the French Assembly in August 1954. On May 6, 1955, the Federal Republic of Germany deposited in Washington its instrument of accession to the North Atlantic Treaty and thus joined NATO as its fifteenth member.

The terms of the Treaty and the organization of the Council and subordinate committees are dealt with in the 1954 Year Book at pp. 113-115.

Developments during 1955-57.*—The North Atlantic Council continued in permanent session at Paris, France, under the chairmanship of the Secretary-General Lord Ismay. Mr. L. D. Wilgress remained the Permanent Representative of Canada to the Council. In addition to the regular meetings of the Permanent Representatives, the Council met in Ministerial Session at Paris in December 1955, in May 1956 and again in December of that year.

These Ministerial meetings afforded the Foreign and Defence Ministers of the NATO countries a useful opportunity to exchange views on the current political developments affecting the Alliance, and to review the progress made in maintaining and developing an effective military organization to assure the security of its members. The year 1956 was of particular importance since it witnessed the beginning of a reappraisal of NATO military planning, designed to take into account NATO's most recent estimates of Soviet intentions and capabilities, and the various types of new weapons available for NATO defence. Of particular interest was the approval of a political directive regarding future military planning, which reaffirmed *inter alia* that NATO, as a defensive alliance, should have sufficient land forces in Europe to act as a shield against any sudden aggression, adequate air and naval forces to retaliate against the aggressor, nuclear weapons for use in the event of overt Soviet military aggression, and the ability to deal locally with situations short of all-out war such as infiltrations, incursions and limited hostile actions. Consideration was also given to the increasing cost of defence and to the problems involved in trying to maintain large conventional forces to deal with limited attacks, in addition to forces equipped with atomic and nuclear weapons.

In their survey of the military capabilities of the Alliance and their assessment of the progress achieved during 1956, member governments found the situation generally encouraging, and noted with particular approval the efforts made by the NATO military authorities to provide NATO forces with new modern weapons.

NATO's activities during the period under review were also marked by the efforts of member governments to improve and extend NATO co-operation in non-military fields, and to develop greater unity within the Atlantic community. The North Atlantic Council appointed at its meeting in May 1956 a Committee of Three Ministers, consisting of Dr. Martino, the Foreign Minister of Italy, Mr. Halvard Lange, Foreign Minister of Norway and the Hon. L. B. Pearson, then Secretary of State for External Affairs for Canada, to advise the Council on ways and means to achieve these objectives. With the aid of questionnaires, supplemented by consultations at the ministerial level with representatives of the other NATO governments, the Committee of Three submitted a report which was approved in principle by the Ministers at the meeting of December 1956 and all recommendations accepted. The report was an important landmark in the development of NATO activities in the non-military field. It stressed the need of members of the Alliance in present circumstances to develop common policies by full and timely consultation on issues of common concern. The appointment of Mr. Paul-Henri Spaak as Secretary-General of the Organization, in succession to Lord Ismay, gave added significance to the approval accorded the recommendations of the Committee of Three for wider authority and powers for the Secretary-General. This office has now become a political as well as an administrative one.

Thus the period under review has been extremely active for the NATO Alliance and the Organization, despite differences which any group of fifteen sovereign countries is bound to experience from time to time, still displays much resiliency, and continues to be as necessary, in the face of Soviet policy and actions in Europe and elsewhere, as it was at the time of its establishment in 1949.

* June 1, 1955 to Apr. 30, 1957.

Canadian Contributions to NATO.—Canada continued in 1956-57 to support NATO with contributions of Armed Forces to the unified NATO commands, with material assistance to other NATO countries and with financial contributions to common budgets. The 2nd Canadian Infantry Brigade, which in late 1955 replaced the 1st Infantry Brigade in the Soest area of Germany, carried out extensive training exercises independently and also in conjunction with other NATO forces in the Northern Army group in Northwest Europe. The Canadian contribution of an air division of 12 jet fighter squadrons to SACEUR remained unchanged. The Royal Canadian Navy had 40 ships assigned to duties connected with the defence of the Canada-United States area and for the protection of any convoys under the control of SACLANT.

Between Apr. 1, 1950 and Mar. 31, 1957, arrangements under the Canadian Mutual Aid Program provided for the transfer by Canada to the non-North American members of NATO of military aid estimated to value \$1,418,400,000.

The main elements of the program include: (a) training in Canada of aircrew for other NATO countries—under the NATO aircrew training program some 4,500 pilots and navigators from ten NATO nations have successfully completed training at RCAF establishments; (b) transfers of equipment from service stocks or from current production for the Services; (c) direct transfers of equipment from current production; and (d) contributions towards infrastructure programs and NATO budgets. Canada's estimated share of the cost of the NATO common infrastructure program for the year ended Mar. 31, 1958, was \$17,000,000. Total Canadian expenditure for NATO Headquarters budgets for the same year is estimated at \$1,300,000.

Subsection 4.—Canada and the Colombo Plan

The Colombo Plan for Co-operative Economic Development in South and South-East Asia was conceived at the Commonwealth Meeting of Foreign Ministers held at Colombo, Ceylon, Jan. 9-14, 1950. Although the Colombo Plan was initiated by Commonwealth governments, it is not exclusively a Commonwealth program. It is designed to assist in the economic development of all countries and territories in the general area of South and South-East Asia. Its membership now includes Australia, Burma, Cambodia, Canada, Ceylon, India, Indonesia, Japan, Laos, Nepal, New Zealand, Pakistan, the Philippines, Thailand, Malaya (Malaya and Singapore), the United Kingdom, British Borneo (North Borneo, Brunei and Sarawak) and Vietnam, as well as the United States which is also engaged in a substantial program of economic aid in the same region.

Supervision of the Colombo Plan is in the hands of a Consultative Committee of Foreign Ministers of the member countries, who meet once a year to review projects, exchange views on policy matters and prepare an annual report. It is, as its name implies, a "consultative" body; no collective policy decisions binding member countries are taken by its meetings. To develop the technical assistance side of the Plan, a Council for Technical Co-operation, on which Canada is represented, meets regularly in Colombo. The Technical Co-operation Programme, though an integral part of the Colombo Plan, is designed to supplement the technical assistance activities of the United Nations and the Specialized Agencies in the area.

From the beginning of the Plan in 1950 through April 1958 Canada will have made available a total of \$196,800,000 for capital and technical assistance projects in South and South-East Asia.

While eight separate countries are now receiving capital assistance from Canada, the largest contributions have so far been made in India, Pakistan and Ceylon. The Canadian contribution has consisted primarily of direct assistance to various development projects (equipment for multi-purpose irrigation and hydro-electric projects, the Canada-India NRX atomic reactor, transportation equipment, fishing boats and surveys of resources). It has also included goods which the recipient governments have been able to use as a

means of raising some of the money needed to meet local costs of development programs (wheat, flour, copper, aluminum and railway equipment). Canadian aid has been helping these countries in both ways, to develop their economies and raise their standards of living.

Under the Technical Assistance Programme up to Mar. 31, 1957, about 650 persons from many countries in the area had been received for training in Canada in a great variety of technical fields and almost 100 Canadian experts had been sent abroad for service in Colombo Plan countries in such fields as fisheries, refrigeration, marine biology, agriculture, soil erosion, vocational training, accountancy and the maintenance of tractors and agricultural machinery. Additional Canadian experts have been employed on aerial resources survey teams and in the installation and operation of capital equipment. Equipment for technical training in various fields has also been supplied.

The Consultative Committee of the Colombo Plan held annual meetings at Singapore in October 1955, and at Wellington, New Zealand, in December 1956. At the Singapore meeting it was agreed that the Colombo Plan should be extended from July 1957 to June 1961, and that the future of the Plan should be considered by the Consultative Committee at the 1957 meeting. Reports of the Committee* on progress and future plans are published after each annual meeting; each report also contains sections describing the activities of member countries.

* Obtainable from the Queen's Printer, Ottawa.

CHAPTER III.—POPULATION*

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

This Chapter presents only a limited summary of the voluminous data on population recorded by the Censuses of Canada. More detailed information and extended analyses are published in the Census volumes and reports which are obtainable from the Queen's Printer or the Dominion Bureau of Statistics, Ottawa. A list of such publications and their prices is available on request.

Section 1.—History of the Census

A brief account of the early censuses of Canada is given under this heading in the 1956 Year Book at pp. 146-149. More detailed information on the history of census-taking in Canada may be found in Volume XI (Administrative Report) of the 1951 Census of Canada, in the Administrative Report of the 1941 Census of Canada, and in Volume I of the 1931 Census of Canada.

Section 2.—The Censuses of 1951 and 1956

The ninth Decennial Census of Canada taken in 1951 was one of the most significant in the country's history. Coming at the mid-point of the century, it provided a means of measuring Canada's development during the first half of the century. Following a decade of great international upheavals—World War II and the immediate postwar adjustment period—it reflected the widespread economic and social changes occurring during that period. Also, with the admission of Newfoundland into Confederation in 1949, it represented Canada's first census as a nation of ten provinces.

* Revised in the Census (Demography) Division, Dominion Bureau of Statistics.

The modern census has become a highly complex administrative and technical operation. Each enumeration has shown considerable advance over its predecessor in planning, organization, enumeration and processing as well as in coverage. The 1951 Census marked the introduction of many new techniques—a number of processing operations were decentralized and were performed for the first time in regional offices located across Canada; mark-sense equipment was used in conjunction with high-speed electronic tabulating machines; and specialized printing processes were employed to speed the release of published reports and volumes. The results of that Census and descriptions of census methods are contained in the printed record* which will form an important source of reference for many years to come.

Commencing around the turn of the century when the western part of Canada was in its early and rapid stages of development, there were censuses of the three Prairie Provinces of Manitoba, Saskatchewan and Alberta at each mid-decade period up to and including 1946. The decision to replace these censuses by a nation-wide census of modified design in 1956 was influenced by the extremely large increases and shifts in the population of Canada shown by intercensal estimates since 1951, and by extensive changes occurring in the agricultural economy of the country. For example, Canada's population increased by over 2,000,000 in the 1951-56 period, a gain almost comparable with that for the complete ten-year period between the decennial censuses of 1941 and 1951. Agricultural changes were characterized by the continuance of the postwar trend toward farm mechanization resulting in fewer and larger farms, often through amalgamation of existing farms, and causing notable changes in types of farming operations and in farm employment.

Such rapidly changing conditions in population and agriculture indicated the need for benchmarks at the five-year period in order to provide accurate estimates over the longer interval of ten years. Also, it was essential to have more up-to-date information on the distribution of the expanded population across the country since 1951 for the many uses required by agencies of government, business, social research, etc. One of the chief values of the 1956 Census is that it provides basic information on population and agriculture for small areas at a point midway between the decennial censuses, information which cannot be obtained from intercensal estimates.

It was realized that if a complete census of Canada were to be undertaken in 1956 it must, of necessity, be of simplified design and limited to basic essentials. Questionnaires were restricted to five 'statistical' inquiries on population (sex, age, marital status, relationship to head of household, and farm or non-farm residence) as compared with 26 in 1951; there were 76 questions on agriculture (farm areas, crop acreages, livestock, farm machinery and farm labour) as compared with approximately 200 in 1951. Such phases of the full-scale 1951 Census operations as the sample Housing Census, the Census of Distribution (retail, wholesale and service establishments), and the Census of the Fisheries were not included in the 1956 program. Also beyond the scope of the modified 1956 Census were population inquiries on birthplace, schooling, origins, religions and languages, as well as economic characteristics dealing with the occupations and industries of persons in the labour force. For such data, the 1951 Census represents the most recent census information available.

Section 3.—Growth of the Population

The population history of Canada, from the first census in 1666 when 3,215 persons were enumerated to the 1956 Census when the figure was 16,080,791, reveals an outstanding rate of population growth. Each census period, of course, contributed to this growth but the periods 1901-11, 1911-21, 1941-51, and 1951-56, merit particular mention. In the decade 1901-11, Canada's population increased by 34.2 p.c., the highest rate of growth in the nation's history. Immigration was the main factor in this gain, 1,800,000

* *Ninth Census of Canada 1951*, Vols. I-XI, \$25, Queen's Printer or Dominion Bureau of Statistics, Ottawa.

persons having entered the country during the period. Despite World War I with its accompanying population losses through casualties, emigration and the influenza epidemic, Canada's population increased by 21.9 p.c. in the 1911-21 decade.

The period 1941-51 recorded the largest numerical gain on record for a ten-year period, 2,502,774 persons being added to the 1941 population during the decade. Newfoundland's entry into Confederation in 1949 accounted for 361,416 of this increase. Immigration, although greatly restricted during the war years, was resumed during the last part of the decade and brought about a net gain of approximately 424,000 in population through immigrant arrivals. This period was also characterized by high birth rates, and the natural increase was just under 2,000,000 for the ten-year period.

The Census of 1956 showed the population of Canada to be 16,080,791, an increase of 2,071,362 or 14.8 p.c. over the 1951 figure of 14,009,429. This numerical increase was exceeded only in the 1941-51 period, and is all the more remarkable since it occurred in only five years. Immigration and a continuation of the high birth rates of the previous decade were characteristic also of the 1951-56 period.

1.—Numerical and Percentage Distribution of Population by Province, Decennial Census Years 1901-51 and 1956

NOTE.—Populations for the decennial Census years 1871, 1881 and 1891 are given in the 1956 Year Book, p. 149. The populations of the Prairie Provinces in 1906, 1916, 1926, 1936 and 1946 will be found in the 1951 edition, p. 131.

Province or Territory	1901	1911	1921	1931	1941	1951	1956
NUMERICAL DISTRIBUTION							
Nfld.....	1	1	1	1	1	361,416	415,074
P.E.I.....	103,259	93,728	88,615	88,038	95,047	98,429	99,285
N.S.....	459,574	492,338	523,837	512,846	577,962	642,584	694,717
N.B.....	331,120	351,889	387,876	408,219	457,401	515,697	554,616
Que.....	1,648,898	2,005,776	2,360,510	2,874,662	3,331,882	4,055,681	4,628,378
Ont.....	2,182,947	2,527,292	2,933,662	3,431,683	3,787,655	4,597,542	5,404,933
Man.....	255,211	461,394	610,118	700,139	729,744	776,541	850,040
Sask.....	91,279	492,432	757,510	921,785	895,992	831,728	880,665
Alta.....	73,022	374,295	588,454	731,605	796,169	939,501	1,123,116
B.C.....	178,657	392,480	524,582	694,263	817,861	1,165,210	1,398,464
Yukon.....	27,219	8,512	4,157	4,230	4,914	9,096	12,190
N.W.T.....	20,129	6,507	8,143	9,316	12,028	16,004	19,313
Canada.....	5,371,315	7,206,643	8,787,949²	10,376,786	11,506,655	14,009,429	16,080,791
PERCENTAGE DISTRIBUTION							
Nfld.....	...	...	...	...	...	2.58	2.58
P.E.I.....	1.92	1.30	1.01	0.85	0.83	0.70	0.62
N.S.....	8.56	6.83	5.96	4.94	5.02	4.59	4.32
N.B.....	6.16	4.88	4.41	3.94	3.97	3.68	3.45
Que.....	30.70	27.83	26.86	27.70	28.96	28.95	28.78
Ont.....	40.64	35.07	33.39	33.07	32.92	32.82	33.61
Man.....	4.75	6.40	6.94	6.75	6.34	5.54	5.29
Sask.....	1.70	6.84	8.62	8.88	7.79	5.94	5.48
Alta.....	1.36	5.19	6.70	7.05	6.92	6.71	6.98
B.C.....	3.33	5.45	5.97	6.69	7.11	8.32	8.70
Yukon.....	0.51	0.12	0.05	0.04	0.04	0.06	0.08
N.W.T.....	0.37	0.09	0.09	0.09	0.10	0.11	0.12
Canada.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00

¹ Populations of Newfoundland (not part of Canada until 1949) were: 1901, 220,984; 1911, 242,619; 1921, 263,033; 1931, 281,500 (estimated); 1941, 303,300 (estimated); and 1945, 321,819.

² Includes 485 members of the Royal Canadian Navy recorded separately in 1921.

Section 4.—Intercensal Estimates and Movement of Population

Intercensal estimates of the population have many uses. They constitute a base for vital statistics rates, per capita figures of production and trade, and other analyses. More recently they have proved useful for estimates of labour force and other population characteristics of data collected in sample surveys.

Estimates are constructed for the total population of Canada and for each province and become available about the date to which they apply, June 1 of each year. The estimates of population begin with the preceding census counts, to which are added the births of the intervening census year or years and from which the deaths are subtracted; immigrants are added and emigrants subtracted. The next succeeding census serves as a check on the accuracy of the annual estimates. On emigration no precise information is available. The Bureau receives yearly from the United States the number of persons who gave Canada as country of last permanent residence before entering the United States as immigrants; and from the United Kingdom's Board of Trade the number of emigrants from Canada taking up permanent residence in the United Kingdom. These data, however, are not available from other countries.

Since estimates for successive years are independently calculated from the latest census, the best estimate of the balance of population change is not obtained by subtracting the figure for one year from that for the year following. Much interest attaches to the year-to-year balance and the following statement is presented, which gives all available data on that point.

<i>Year</i>	<i>Calendar Year Data¹</i>				<i>Estimated Population as at June 1¹</i>
	<i>Births</i>	<i>Deaths</i>	<i>Natural Increase</i>	<i>Immi- gration</i>	
1941.....	255,317	114,639	140,678	9,329	11,490,000
1942.....	272,313	112,978	159,335	7,576	11,637,000
1943.....	283,580	118,635	164,945	8,504	11,778,000
1944.....	284,220	116,052	168,168	12,801	11,929,000
1945.....	288,730	113,414	175,316	22,722	12,055,000
1946.....	330,732	114,931	215,801	71,719	12,268,000
1947.....	359,094	117,725	241,369	64,127	12,527,000
1948.....	347,307	119,384	227,923	125,414	12,799,000
1949.....	366,139	124,047	242,092	95,217	13,423,000
1950.....	371,071	123,789	247,282	73,912	13,688,000
1951.....	389,101	125,454	254,647	194,391	13,984,000
1952.....	402,527	125,950	276,577	164,498	14,434,000
1953.....	416,825	127,381	289,444	168,868	14,820,000
1954.....	435,142	124,520	310,622	154,227	15,260,000
1955.....	441,681	128,154	313,527	109,946	15,669,000
1956.....	449,473	131,585	317,888	164,857	16,049,000

¹ Exclusive of the Yukon and Northwest Territories. Newfoundland included from 1949

2.—Estimates of Population by Province, Intercensal Years 1941-57

NOTE.—At every census the previous post-censal estimates, made at June 1 each year, are adjusted to the newly recorded population figures. Figures for all provinces for 1941, 1951 and 1956 and for the Prairie Provinces for 1946 are census figures. Figures for 1867-1904 will be found in the 1936 Year Book, p. 141; for 1905-30 in the 1946 edition, p. 127; and for 1931-40 in the 1952-53 edition, p. 143.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada
	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000
1941.....	...	95	578	457	3,332	3,788	730	896	796	818	5	12	11,507
1942.....	...	90	591	464	3,390	3,884	724	848	776	870	5	12	11,654
1943.....	...	91	606	463	3,457	3,915	723	838	785	900	5	12	11,795
1944.....	...	91	611	461	3,500	3,963	727	836	808	932	5	12	11,946
1945.....	...	92	619	467	3,560	4,000	727	833	808	949	5	12	12,072
1946.....	...	94	608	478	3,629	4,093	727	833	803	1,003	8	16	12,292
1947.....	...	94	615	488	3,710	4,176	739	836	825	1,044	8	16	12,551
1948.....	...	93	625	498	3,788	4,275	746	838	854	1,082	8	16	12,823
1949.....	345	94	629	508	3,882	4,378	757	832	885	1,113	8	16	13,447
1950.....	351	96	638	512	3,969	4,471	768	833	913	1,137	8	16	13,712
1951.....	361	98	643	516	4,056	4,598	776	832	939	1,165	9	16	14,009
1952.....	374	100	653	526	4,174	4,788	798	843	973	1,205	9	16	14,459
1953.....	383	101	663	533	4,260	4,941	809	861	1,012	1,248	9	16	14,845
1954.....	395	101	673	540	4,388	5,115	823	873	1,057	1,295	10	17	15,287
1955.....	406	100	683	547	4,517	5,266	839	878	1,091	1,342	11	18	15,698
1956.....	415	99	695	555	4,628	5,405	850	881	1,123	1,399	12	19	16,081
1957.....	426	99	702	565	4,758	5,622	860	879	1,160	1,487	12	19	16,589

Table 3 shows the natural increase and the total population increase according to the Census for Canada and the provinces in the periods 1931-41, 1941-51 and 1951-56. The difference between the natural increase and the total increase in population during a period represents the difference between inward and outward movements, i.e., net migration. The net migration data shown for provinces indicate the net movement of population arising partly from interchange of population between provinces and partly from persons entering and leaving the country.

The traditional movement of population on the North American Continent from east to west has not been apparent in Canadian statistics in recent years. The most spectacular changes are shown in the Prairie Provinces and in British Columbia. While the three Prairie Provinces lost by migration about 250,000 persons between 1931 and 1941 and somewhat more from 1941 to 1951, they gained in the period 1951-56. Manitoba lost over 100,000 population between 1931 and 1951 but only 152 persons between 1951 and 1956. Saskatchewan has been a consistent loser since 1931, losing over 15,000 annually during the 1930's, almost 20,000 annually during the 1940's and just under 8,000 annually during the 1950's. Alberta lost over 40,000 persons in the decade 1931-41 but only about 7,000 in the next decade and gained over 60,000 in the five years 1951-56. British Columbia gained at the rate of about 8,000 persons a year during the 1930's, about 23,000 a year

during the 1940's and about 27,000 a year in the first half of the 1950's. On an absolute basis Ontario received more people than did British Columbia but, in relation to its larger population, this growth was only about one-third as important. Quebec had a slight loss between 1931 and 1951 and a considerable gain in the next five years. Nova Scotia gained population during the 1930's but has been losing ever since; the Maritimes as a whole lost 138,000 persons over the quarter-century.

3.—Numerical Changes in the Population of the Provinces through Migration 1931-41, 1941-51, and 1951-56

Province	Natural Increase			Population Increase according to Census			Net Migration		
	1931-41	1941-51	1951-56	1931-41	1941-51	1951-56	1931-41	1941-51	1951-56
Nfld.....	...	...	52,892	...	...	53,658	...	...	+766
P.E.I.....	9,681	15,802	8,020	7,009	3,382	856	-2,672	-12,420	-8,064
N.S.....	57,268	103,512	63,156	65,116	64,622	52,133	+7,848	-38,890	-11,023
N.B.....	59,359	99,904	59,812	49,182	58,296	38,919	-10,177	-41,608	-20,893
Que.....	459,211	736,058	474,516	457,220	723,799	572,697	-1,991	-12,259	+98,181
Ont.....	278,488	505,034	431,913	355,972	809,887	807,391	+77,484	+304,853	+375,478
Man.....	78,083	107,510	73,651	29,605	46,797	73,499	-48,478	-60,713	-152
Sask.....	131,752	135,106	85,978	-25,793	-64,264	48,937	-157,545	-199,370	-37,041
Alta.....	106,405	150,303	119,307	64,564	143,332	183,615	-41,841	-6,971	+64,308
B.C.....	41,100	116,527	98,006	123,598	347,349	233,254	+82,498	+230,822	+135,248
Canada¹.....	1,221,787	1,972,394	1,471,766	1,129,869	2,141,358	2,071,362	-91,918	+168,964	+599,596

¹ Includes the Yukon and Northwest Territories.

Section 5.—Density of Population

The land area and density of the population per square mile is given by province in Table 4 for census years 1931, 1941, 1951 and 1956. It will be noted that the figures for 1951 and 1956 include the Province of Newfoundland, a fact that should be kept in mind in comparisons with earlier censuses.

4.—Land Area and Density of Population by Province, Decennial Census Years 1931-51 and 1956

Province or Territory	Land Area in Sq. Miles	Population, 1931		Population, 1941		Population, 1951		Population, 1956	
		Total	Per Sq. Mile	Total	Per Sq. Mile	Total	Per Sq. Mile	Total	Per Sq. Mile
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland ¹	143,045	...	...	...	...	361,416	2.53	415,074	2.90
Prince Edward Island...	2,184	85,038	40.31	95,047	43.52	98,429	45.07	99,285	45.46
Nova Scotia.....	20,743	512,846	24.72	577,962	27.86	642,584	30.98	694,717	33.49
New Brunswick.....	27,473	408,219	14.86	457,401	16.65	515,697	18.77	554,616	20.19
Quebec.....	523,860	2,874,662	5.49	3,331,882	6.36	4,055,681	7.74	4,628,378	8.84
Ontario.....	333,835	3,431,683	10.28	3,787,655	11.35	4,597,542	13.77	5,404,933	16.19
Manitoba.....	211,775	700,139	3.31	729,744	3.45	770,541	3.67	850,040	4.01
Saskatchewan.....	220,182	921,785	4.19	895,992	4.07	831,728	3.78	880,665	4.00
Alberta.....	248,800	731,065	2.94	796,169	3.20	939,501	3.78	1,123,116	4.51
British Columbia.....	359,279	694,263	1.93	817,861	2.28	1,165,210	3.24	1,398,464	3.89
Canada (Exclusive of the Territories)....	2,091,176	10,363,240	5.32²	11,483,713	5.90²	13,984,329	6.69³	16,049,288	7.67³
Yukon Territory.....	205,346	4,230	0.02	4,914	0.02	9,096	0.04	12,190	0.06
Northwest Territories...	1,253,438	9,316	0.01	12,028	0.01	16,004	0.01	19,313	0.02
Canada.....	3,549,960	10,376,786	3.05⁴	11,506,655	3.38⁴	14,009,429	3.95⁴	16,080,791	4.53⁴

¹ Includes Labrador.

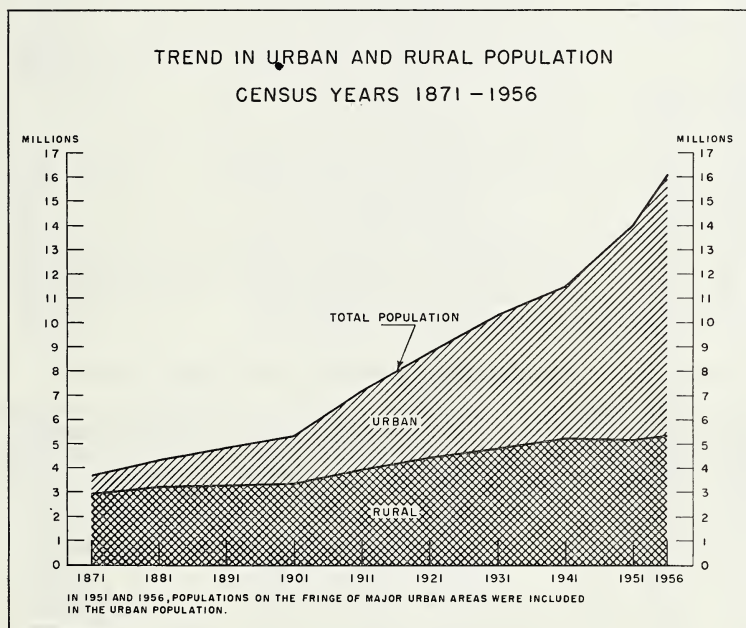
² Calculated on the basis of 1,948,131 sq. miles which excludes the land area of Newfoundland.

³ Includes Newfoundland.

⁴ Calculated on the basis of 3,406,915 sq. miles which excludes the land area of Newfoundland.

Section 6.—Rural and Urban Population

Before 1951 the population residing within the boundaries of all incorporated cities, towns and villages of a province was classified by the census as urban and the remainder as rural. Since the laws governing incorporation vary among provinces, there was no uniform line of demarcation between the rural and urban population throughout Canada. In the 1951 Census the aggregate number of residents within a given area, rather than provincial legal status, was the main criterion for the rural-urban classification. The population residing in cities, towns and villages of 1,000 or over, whether incorporated or unincorporated, as well as the population of all parts of census metropolitan areas, was defined as urban and that outside such localities as rural. The 1956 Census definition was substantially the same as that used in the Census of 1951 except that the fringe parts of other major urban areas were classed as urban.



A change in the composition of urban size groups was made also for the 1956 Census. At the 1951 Census, each municipality located within the boundaries of a census metropolitan area was allocated to an urban size group according to its own individual size. In 1956, each such municipality was classified to the same urban size group as the total metropolitan area of which it formed a part. In addition, the fringe parts of other major urban areas were included in the tabulations by urban size groups in the same manner as those of census metropolitan areas.

Table 5 presents the rural and urban population by province or territory for 1956. The rural is further classified by farm and non-farm residence and the urban by size of locality.

5.—Rural Population classified by Farm and Non-farm, and Urban Population classified by Size Group, by Province, Census 1956

Province or Territory	Rural			Urban				
	Farm ¹	Non-farm	Total	1,000 to 9,999	10,000 to 29,999	30,000 to 99,999	100,000 or Over	Total
Newfoundland.....	10,138	219,684	229,822	84,036	23,225	77,991	—	185,252
Prince Edward Island.....	43,112	25,703	68,815	13,763	16,707	—	—	30,470
Nova Scotia.....	95,381	200,242	295,623	103,996	22,551	—	272,547	399,094
New Brunswick.....	125,011	175,315	300,326	87,957	30,300	136,033	—	254,290
Quebec.....	740,387	647,153	1,387,540	649,356	288,039	293,556	2,009,887	3,240,838
Ontario.....	632,153	669,861	1,302,014	605,924	403,281	801,247	2,292,467	4,102,919
Manitoba.....	202,163	137,294	339,457	55,907	45,555	—	409,121	510,583
Saskatchewan.....	360,651	198,011	558,662	98,272	61,118	162,613	—	322,003
Alberta.....	327,201	160,091	487,292	121,745	62,626	—	451,453	635,824
British Columbia.....	95,338	276,659	371,997	168,575	67,428	—	790,464	1,026,467
Yukon Territory.....	40	9,580	9,620	2,570	—	—	—	2,570
Northwest Territories.....	12	14,756	14,768	4,545	—	—	—	4,545
Canada.....	2,631,587	2,734,349	5,365,936	1,996,646	1,020,830	1,471,440	6,225,939	10,714,855

¹ Excludes 115,168 persons living on farms in localities classed as urban.

Section 7.—Population of Counties and Census Divisions

Population totals for counties and census divisions for the census years 1951 and 1956 are presented in Table 6. Corresponding information for the census years 1901-41 is given in the 1952-53 Year Book, pp. 137-141. The 1956 populations of the subdivisions of the counties and census divisions may be found in Reports No. 1-1 to 1-5 of the 1956 Census of Canada, and further details for the earlier census years in *Ninth Census of Canada, 1951*, Vol. I.

6.—Populations of the Provinces and Territories by Counties and Census Divisions, Census Years 1951 and 1956

Province and Division	1951	1956	Province and Division or County	1951	1956
	No.	No.		No.	No.
Canada.....	14,009,429	16,080,791	Newfoundland—concluded		
Newfoundland.....	361,416	415,074	Division No. 8.....	36,799	40,629
Division No. 1.....	149,543	171,213	Division No. 9.....	17,051	19,970
Division No. 2.....	22,366	23,980	Division No. 10.....	7,890	10,814
Division No. 3.....	20,434	21,675			
Division No. 4.....	15,982	19,631	Prince Edward Island.....	98,429	99,285
Division No. 5.....	28,089	35,215	Kings.....	17,943	17,853
Division No. 6.....	27,968	33,738	Prince.....	37,735	38,007
Division No. 7.....	35,294	38,209	Queens.....	42,751	43,425

6.—Populations of the Provinces and Territories by Counties and Census Divisions, Census Years 1951 and 1956—continued

Province and County	1951	1956	Province and County	1951	1956
No.	No.	No.	No.	No.	No.
Nova Scotia	642,584	694,717	Quebec—concluded		
Annapolis.....	21,747	21,682	Hull.....	92,582	109,833
Antigonish.....	11,971	13,076	Gatineau.....	35,264	40,764
Cape Breton.....	120,306	125,478	Hull.....	67,318	69,079
Colchester.....	31,536	34,640	Huntingdon.....	13,457	14,278
Cumberland.....	39,655	39,598	Iberville.....	13,507	15,724
Digby.....	19,989	19,869	Jacques Cartier (included in		
Guysborough.....	14,245	13,802	Montreal Island)		
Halifax.....	162,217	197,943	Joliette.....	37,251	40,706
Hants.....	23,357	24,889	Kamouraska.....	26,672	27,817
Inverness.....	18,390	18,235	Labelle.....	27,197	28,492
Kings.....	33,183	37,816	Lac St. Jean.....	82,006	96,673
Lunenburg.....	33,256	34,207	Lac St. Jean East.....	31,128	38,273
Pictou.....	44,002	44,566	Lac St. Jean West.....	60,878	68,400
Queens.....	12,544	12,774	Laprairie.....	18,639	24,620
Richmond.....	10,783	10,961	L'Assomption.....	23,205	28,642
Shelburne.....	14,392	14,604	Laval (included in Jesus Is-		
Victoria.....	8,217	8,185	land)		
Yarmouth.....	22,794	22,392	Lévis.....	43,625	46,839
			L'Islet.....	22,996	24,047
			Lotbinière.....	27,985	30,116
			Maskinongé.....	19,478	20,870
			Matane.....	64,182	71,042
New Brunswick	515,697	554,616	Matane.....	30,243	34,967
Albert.....	9,910	10,943	Matapédia.....	33,939	36,085
Carleton.....	22,269	23,073	Mégantic.....	45,325	53,028
Charlotte.....	25,136	24,497	Missisquoi.....	24,689	26,773
Gloucester.....	57,489	64,119	Montcalm.....	17,520	18,670
Kent.....	26,767	27,492	Montmagny.....	24,729	25,969
Kings.....	22,467	24,267	Montmorency.....	21,389	24,598
Madawaska.....	34,329	36,988	Montmorency No. 1.....	17,040	19,863
Northumberland.....	42,994	47,223	Montmorency No. 2.....	4,736	
Queens.....	13,206	12,838	Montreal and Jesus Islands.....	1,358,075	1,577,063
Restigouche.....	36,212	39,720	Jesus Island.....	37,843	69,410
St. John.....	74,497	81,392	Montreal Island.....	1,320,232	1,507,653
Sunbury.....	9,322	10,547	Napierville.....	9,203	10,140
Victoria.....	18,541	19,020	Nicolet.....	30,335	31,248
Westmorland.....	80,012	85,414	Papineau.....	29,381	30,175
York.....	42,546	47,083	Pontiac.....	20,696	20,995
			Portneuf.....	43,453	46,098
			Quebec.....	252,890	288,754
Quebec	4,055,681	4,628,378	Richelieu.....	30,801	36,086
Abitibi.....	86,356	99,578	Richmond.....	34,102	38,641
Argenteuil.....	25,872	28,474	Rimouski.....	53,220	61,357
Arthabaska.....	36,957	41,422	Rouville.....	19,506	22,083
Bagot.....	19,224	20,213	Saguenay ²	42,664	57,364
Beauce.....	54,973	59,957	Shefford.....	43,722	48,665
Beauharnois.....	38,748	42,691	Sherbrooke.....	62,166	70,568
Bellechasse.....	25,117	26,203	Soulanges.....	9,233	9,736
Berthier.....	24,717	26,359	Stanstead.....	34,642	35,319
Bonaventure.....	41,121	43,240	St. Hyacinthe.....	38,101	40,302
Brome.....	13,393	13,790	St. Jean.....	28,702	34,054
Chambly.....	77,931	111,979	St. Maurice.....	93,855	102,050
Champlain.....	85,745	102,674	Témiscamingue.....	55,102	57,661
Charlevoix.....	28,259	30,263	Témiscouata.....	65,550	68,362
Charlevoix East.....	14,511	16,706	Rivière-du-Loup.....	37,376	39,461
Charlevoix West.....	13,748	14,557	Témiscouata.....	28,176	28,901
Châteauguay.....	17,857	22,588	Terrebonne.....	67,437	81,329
Chicoutimi.....	115,904	137,999	Vaudreuil.....	17,378	22,625
Compton.....	23,856	25,057	Verchères.....	17,729	20,908
Deux-Montagnes.....	21,048	26,595	Wolfe.....	18,153	18,774
Dorchester.....	33,313	34,692	Yamaska.....	16,071	16,616
Drummond.....	53,426	55,565			
Frontenac.....	30,733	31,433			
Gaspé.....	62,530	71,896	Ontario	4,597,542	5,404,933
Gaspé East.....	37,442	41,319	Algoma.....	64,496	82,059
Gaspé West.....	15,089	19,021	Brant.....	72,857	77,992
Madeleine Islands.....	9,999	11,556	Bruce.....	41,311	42,070
Hochelaga (included in			Carleton.....	242,247	282,630
Montreal Island)			Cochrane.....	83,850	86,768

¹ Includes districts Abitibi and Mistassini.² Includes New Quebec district.

**6.—Populations of the Provinces and Territories by Counties and Census Divisions,
Census Years 1951 and 1956—concluded**

Province and County or Division	1951	1956	Province and Division	1951	1956
	No.	No.		No.	No.
Ontario—concluded			Manitoba—concluded		
Dufferin.....	14,566	15,569	Division No. 10.....	19,311	18,928
Dundas.....	15,818	16,978	Division No. 11.....	25,101	24,567
Durham.....	30,115	35,827	Division No. 12.....	23,357	23,666
Elgin.....	55,518	59,114	Division No. 13.....	24,537	24,188
Essex.....	217,150	246,901	Division No. 14.....	23,499	22,581
Frontenac.....	66,099	76,534	Division No. 15.....	12,492	12,365
Glengarry.....	17,702	18,693	Division No. 16.....	45,692	52,564
Grenville.....	17,045	20,563	Saskatchewan.....	831,728	880,665
Grey.....	58,960	60,971	Division No. 1.....	35,481	36,948
Haldimand.....	24,138	26,067	Division No. 2.....	34,714	33,929
Haliburton.....	7,670	8,012	Division No. 3.....	29,477	29,686
Halton.....	44,003	68,297	Division No. 4.....	16,691	17,386
Hastings.....	74,298	83,745	Division No. 5.....	48,877	47,000
Huron.....	49,280	51,728	Division No. 6.....	113,614	132,849
Kenora ¹	39,212	47,156	Division No. 7.....	50,421	58,448
Kent.....	79,128	85,362	Division No. 8.....	35,211	39,643
Lambton.....	74,960	89,939	Division No. 9.....	54,939	52,931
Lanark.....	35,601	38,025	Division No. 10.....	37,633	35,903
Leeds.....	38,831	43,077	Division No. 11.....	84,365	102,715
Lennox and Addington.....	19,544	21,611	Division No. 12.....	27,896	28,484
Lincoln.....	89,366	111,740	Division No. 13.....	30,721	32,972
Manitoulin.....	11,214	11,060	Division No. 14.....	61,615	54,971
Middlesex.....	162,139	190,897	Division No. 15.....	81,160	82,502
Muskoka.....	24,713	25,134	Division No. 16.....	45,211	45,339
Nipissing.....	50,517	60,452	Division No. 17.....	29,048	29,049
Norfolk.....	42,708	46,122	Division No. 18.....	14,654	19,910
Northumberrland.....	33,482	38,018	Alberta.....	939,501	1,123,116
Ontario.....	87,088	108,440	Division No. 1.....	28,317	34,496
Oxford.....	58,818	65,228	Division No. 2.....	67,694	74,991
Parry Sound.....	27,371	28,095	Division No. 3.....	27,667	30,426
Peel.....	55,673	83,108	Division No. 4.....	13,182	14,294
Perth.....	52,584	55,057	Division No. 5.....	39,055	38,120
Peterborough.....	60,789	67,981	Division No. 6.....	177,441	237,886
Prescott.....	25,576	26,291	Division No. 7.....	40,217	40,214
Prince Edward.....	18,559	21,145	Division No. 8.....	57,513	64,168
Rainy River.....	22,132	25,483	Division No. 9.....	19,496	17,239
Renfrew.....	66,717	78,245	Division No. 10.....	70,677	71,500
Russell.....	17,666	18,994	Division No. 11.....	235,475	323,539
Simcoe.....	106,482	127,016	Division No. 12.....	39,886	44,947
Stormont.....	48,455	56,452	Division No. 13.....	46,638	45,033
Sudbury.....	109,590	141,975	Division No. 14.....	14,443	15,846
Thunder Bay.....	105,367	122,800	Division No. 15.....	61,800	70,417
Timiskaming.....	50,016	50,264	British Columbia.....	1,165,210	1,398,464
Victoria.....	27,127	28,248	Division No. 1.....	27,628	30,584
Waterloo.....	126,123	148,774	Division No. 2.....	60,060	65,615
Welland.....	123,233	149,606	Division No. 3.....	77,686	84,871
Wellington.....	66,930	75,691	Division No. 4.....	649,238	767,921
Wentworth.....	266,083	316,238	Division No. 5.....	215,003	256,355
York.....	1,176,622	1,440,601	Division No. 6.....	41,823	54,304
Manitoba.....	776,541	850,049	Division No. 7.....	18,247	21,022
Division No. 1.....	23,861	24,888	Division No. 8.....	40,276	60,067
Division No. 2.....	38,971	39,118	Division No. 9.....	20,854	37,211
Division No. 3.....	22,870	22,520	Division No. 10.....	14,395	20,514
Division No. 4.....	15,036	14,630	Yukon Territory.....	9,096	12,190
Division No. 5.....	52,463	60,568	Northwest Territories.....	16,004	19,313
Division No. 6.....	330,130	368,724			
Division No. 7.....	40,791	45,923			
Division No. 8.....	19,565	22,171			
Division No. 9.....	58,875	72,639			

¹ Includes district of Patricia.

Section 8.—Population of Incorporated Urban Centres

The growth of Canadian cities with populations of over 30,000 from 1951 to 1956, together with the years of their incorporation as cities, is shown in Table 7. All incorporated cities, towns and villages having populations of 1,000 or over in 1956 are listed in Table 10.

CANADA

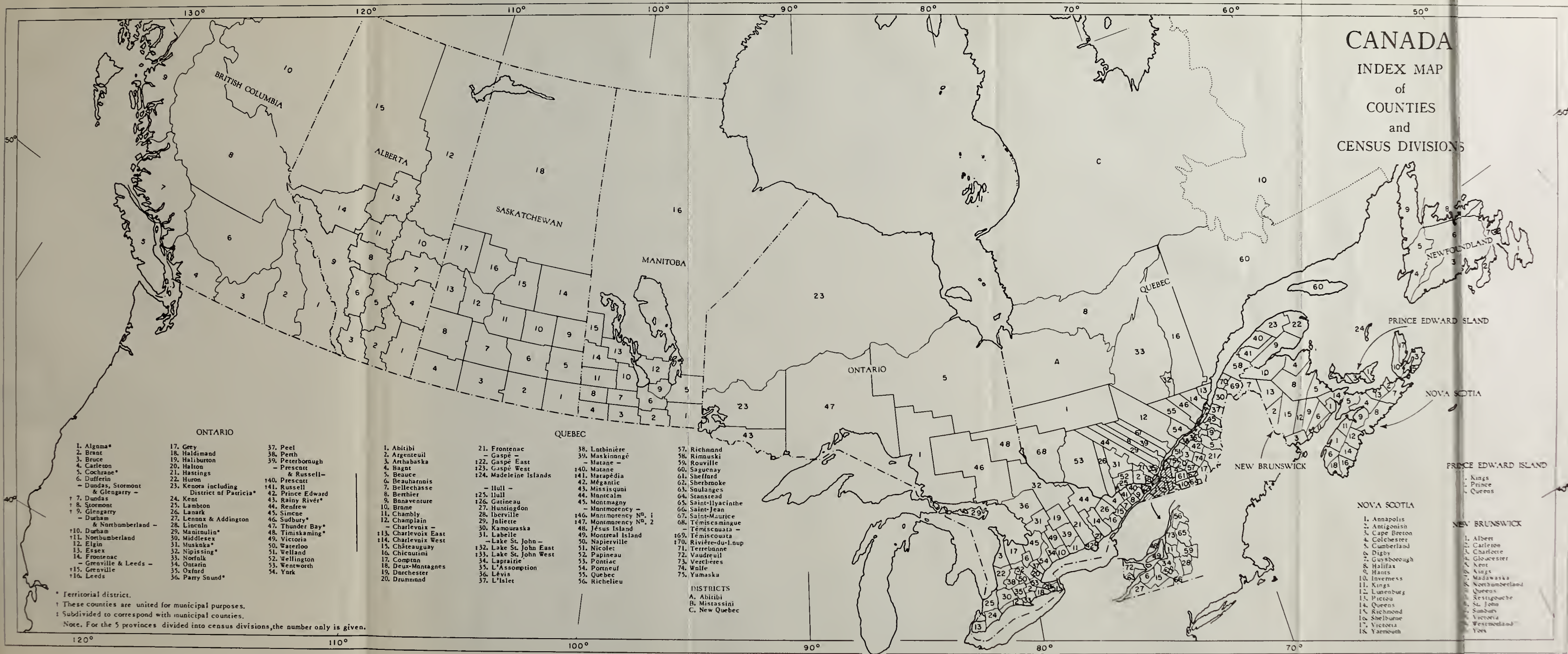
INDEX MAP

of

COUNTIES

and

CENSUS DIVISIONS



* Territorial district.

† These counties are united for municipal purposes.

‡ Subdivided to correspond with municipal counties.

Note. For the 5 provinces divided into census divisions, the number only is given.

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7.—Incorporated Cities with Populations of Over 30,000 at the 1956 Census and Comparable Data for 1951

City and Province	Year of Incorporation as City	Population		City and Province	Year of Incorporation as City	Population	
		1951	1956			1951	1956
		No.	No.			No.	No.
Brantford, Ont.....	1877	36,727	51,869	Quebec, Que.....	1832	164,016	170,703
Calgary, Alta.....	1893	129,060	181,780	Regina, Sask.....	1903	71,319	89,755
Edmonton, Alta.....	1904	159,631	226,002	St. Catharines, Ont.....	1876	37,984	39,708
Fort William, Ont.....	1907	34,947	39,464	Saint John, N.B.....	1785	50,779	52,491
Guelph, Ont.....	1879	27,386	33,860	St. John's, Nfld.....	1888	52,873	57,078
Halifax, N.S.....	1841	85,589	93,301	St. Laurent, Que.....	1955	20,426	38,291
Hamilton, Ont.....	1846	208,321	239,625	Sarnia, Ont.....	1914	34,697	43,447
Hull, Que.....	1875	43,483	49,243	Saskatoon, Sask.....	1906	53,268	72,858
Jacques-Cartier, Que.....	1951	22,450	33,132	Sault Ste. Marie, Ont.....	1912	32,452	37,329
Kingston, Ont.....	1846	33,459	48,618	Sherbrooke, Que.....	1875	50,543	58,668
Kitchener, Ont.....	1912	44,867	59,562	Sudbury, Ont.....	1930	42,410	46,482
Lachine, Que.....	1909	27,773	34,494	Sydney, N.S.....	1904	31,317	32,162
London, Ont.....	1855	95,343	101,693	Three Rivers, Que.....	1857	46,074	50,483
Moncton, N.B.....	1890	27,334	36,003	Toronto, Ont.....	1834	675,754	667,706
Montreal, Que.....	1832	1,021,520	1,109,439	Vancouver, B.C.....	1886	344,833	364,844
New Westminster, B.C....	1860	28,639	31,665	Verdun, Que.....	1912	77,391	78,262
Oshawa, Ont.....	1924	41,545	50,412	Victoria, B.C.....	1862	51,331	54,584
Ottawa, Ont.....	1854	202,045	222,129	Windsor, Ont.....	1892	120,049	121,980
Peterborough, Ont.....	1905	38,272	42,698	Winnipeg, Man.....	1873	235,710	255,093
Port Arthur, Ont.....	1907	31,161	38,136				

For census purposes, metropolitan areas have been established for groups of urban communities that are in close economic, geographic and social relationship. The total population of each of the census metropolitan areas in 1956, with the comparable figure from the 1951 Census covering the same area as in 1956, is shown in Table 8. In this table the metropolitan area has been named after the largest city of each urban group.

8.—Populations of Census Metropolitan Areas 1956 compared with Populations of Same Areas in 1951

Metropolitan Area	Population		Metropolitan Area	Population	
	1951	1956		1951	1956
	No.	No.		No.	No.
Calgary, Alta.....	140,645	200,449	Saint John, N.B.....	78,337	86,015
Edmonton, Alta.....	173,748	251,004	St. John's, Nfld.....	67,313	77,991
Halifax, N.S.....	133,931	164,200	Toronto, Ont.....	1,117,470	1,358,028
Hamilton, Ont.....	272,327	327,831	Vancouver, B.C.....	561,960	665,017
London, Ont.....	128,977	154,453	Victoria, B.C.....	108,285	125,447
Montreal, Que.....	1,395,400	1,620,758	Windsor, Ont.....	163,618	185,865
Ottawa, Ont.....	292,476	345,460	Winnipeg, Man.....	354,069	409,121
Quebec, Que.....	274,827	309,959			

The distribution of the population of incorporated urban centres in Canada by size groups is given in Table 9 for the census years 1941, 1951 and 1956.

9.—Populations of Incorporated Cities, Towns and Villages by Size, Census Years 1941, 1951 and 1956

Size Group	1941 ¹			1951			1956		
	Urban Centres	Population	P.C. of Total Pop.	Urban Centres	Population	P.C. of Total Pop.	Urban Centres	Population	P.C. of Total Pop.
	No.	No.		No.	No.		No.	No.	
Over 500,000.....	2	1,570,464	13.65	2	1,697,274	12.11	2	1,777,145	11.05
Between—									
400,000 and 500,000.....	—	—	—	—	—	—	—	—	—
300,000 and 400,000.....	—	—	—	1	344,833	2.46	1	365,844	2.28
200,000 and 300,000.....	2	497,313	4.32	3	646,076	4.61	4	942,849	5.86
100,000 and 200,000.....	4	577,356	5.02	4	572,756	4.09	4	576,156	3.58
50,000 and 100,000.....	7	508,808	4.42	9	588,436	4.20	12	769,323	4.78
25,000 and 50,000.....	19	605,805	5.26	24	802,380	5.73	27	929,624	5.78
15,000 and 25,000.....	20	377,505	3.28	34	636,713	4.54	43	853,341	5.31
10,000 and 15,000.....	24	296,195	2.57	29	347,410	2.48	44	527,802	3.28
5,000 and 10,000.....	74	510,429	4.44	100	720,077	5.14	117	830,289	5.16
3,000 and 5,000.....	91	348,709	3.03	119	457,492	3.27	130	497,818	3.10
1,000 and 3,000.....	337	561,019	4.88	409	698,092	4.98	450	772,013	4.80
Under 1,000.....	1,060	398,813	3.47	1,049	429,683	3.07	1,039	443,922	2.76
Totals.....	1,640	6,252,416	54.34	1,783	7,941,222	56.68	1,873	9,286,126	57.75

¹ Newfoundland not included.

Of the 1,873 incorporated urban centres in Canada at the date of the latest Census (June 1, 1956) 834 had a population of 1,000 or over. These are listed alphabetically by province in Table 10 with their 1956 populations and comparative figures for 1951.

10.—Incorporated Cities, Towns and Villages having Populations of 1,000 or Over, by Province, Census Years 1951 and 1956

Province and Incorporated Centre	1951	1956	Province and Incorporated Centre	1951	1956
	No.	No.		No.	No.
Newfoundland—			Prince Edward Island—		
Bay Roberts.....	1,222	1,306	Charlottetown.....	15,887	16,707
Burgeo.....	891	1,138	Montague.....	1,068	1,152
Burin.....	796	1,116	Parkdale.....	1	1,422
Carbonear.....	3,351	3,955	Souris.....	1,183	1,449
Channel-Port aux Basques.....	2,634	3,320	Spring Park.....		1,370
Clarenville.....	1	1,195	Summerside.....	6,547	7,242
Corner Brook.....	2	23,225			
Deer Lake.....	2,655	3,481			
Fogo.....	1,078	1,184	Nova Scotia—		
Fortune.....	867	1,194	Amherst.....	9,870	10,301
Freshwater.....	810	1,048	Antigonish.....	3,196	3,592
Grand Bank.....	2,148	2,430	Berwick.....	1,045	1,134
Harbour Grace.....	2,331	2,545	Bridgetown.....	1,038	1,041
Lewisport.....	1,218	2,076	Bridgewater.....	4,010	4,445
Marystown.....	1	1,460	Canso.....	1,313	1,261
Mount Pearl Park-Glendale.....	1	1,979	Dartmouth.....	15,037	21,093
Placentia.....	614 ³	1,233	Digby.....	2,047	2,145
St. Anthony.....	1,380	1,761	Dominion.....	3,143	2,964
St. John's.....	52,873	57,078	Glace Bay.....	25,586	24,416
St. Lawrence.....	1,451	1,837	Halifax.....	85,589	93,301
Stephenville.....	1	3,762	Hantsport.....	1,131	1,298
Wabana.....	6,460	7,873	Inverness.....	2,360	2,026
Wesleyville.....	1,304	1,313	Kentville.....	4,240	4,937
Windsor.....	3,674	4,520	Liverpool.....	3,535	3,500

For footnotes, see end of table, p. 132.

**10.—Incorporated Cities, Towns and Villages having Populations of 1,000 or Over,
by Province, Census Years 1951 and 1956—continued**

Province and Incorporated Centre	1951	1956	Province and Incorporated Centre	1951	1956
	No.	No.		No.	No.
Nova Scotia—concluded			Quebec—continued		
Lockeport.....	1,225	1,207	Beaconsfield.....	1,888	5,496
Louisburg.....	1,120	1,314	Beauceville.....	1,149	1,459
Lunenburg.....	2,816	2,859	Beauceville E.....	1,573	1,740
Mahone Bay.....	1,019	1,109	Beauharnois.....	5,694	6,774
Middleton.....	1,506	1,769	Beaupré.....	5,390	6,735
Mulgrave.....	1,212	1,227	Beaupré.....	2,015 ^a	2,381
New Glasgow.....	9,933	9,998	Bedford.....	2,073	2,272
New Waterford.....	10,423	10,381	Beebe Plain.....	1,352	1,363
North Sydney.....	7,351	8,125	Belœil.....	2,992	3,966
Oxford.....	1,466	1,545	Bernierville.....	1,959	2,431
Parrsboro.....	1,906	1,849	Berthierville.....	3,325	3,504
Pictou.....	4,259	4,564	Bic.....	1,086	1,142
Port Hawkesbury.....	1,034	1,078	Black Lake.....	2,800	3,685
Shelburne.....	2,040	2,337	Bois des Filion.....	787	1,648
Springhill.....	7,138	7,348	Boucherville.....	1,583	3,911
Stellarton.....	5,575	5,445	Bourlamaque.....	2,460	3,018
Stewiacke.....	1,018	1,024	Bromptonville.....	2,025	2,316
Sydney.....	31,317	32,162	Brownsburg.....	3,238	3,412
Sydney Mines.....	8,410	8,731	Buckingham.....	6,129	6,781
Trenton.....	3,089	3,240	Cabano.....	2,594	2,350
Truro.....	10,756	12,250	Cadillac.....	1,514	1,281
Westville.....	4,301	4,247	Campbell's Bay.....	975	1,029
Windsoir.....	3,439	3,651	Cap Chat.....	1,642	1,954
Wolfville.....	2,313	2,497	Cap de la Madeleine.....	18,667	22,943
Yarmouth.....	8,106	8,095	Causapscal.....	2,609	2,987
			Chambly.....	2,160	2,817
			Chambord.....	1,070	1,091
			Chandler.....	2,326	3,338
New Brunswick—			Charlemagne.....	1,856	2,428
Bathurst.....	4,453	5,267	Charlesbourg.....	5,734	8,202
Campbellton.....	7,754	8,389	Charny.....	3,300	3,639
Chatham.....	5,223	6,332	Châteauguay.....	2,240	3,265
Dalhousie.....	4,939	5,468	Châteauguay Heights.....	627	1,146
Dieppe.....	3,402	3,876	Chibougamau.....	1	1,262
Edmundston.....	10,753	11,997	Chicoutimi.....	23,111	24,878
Fredericton.....	16,018	18,303	Chicoutimi N.....	3,966	6,446
Grand Falls.....	2,365	3,672	Clermont.....	2,027	2,628
Hartland.....	1,000	1,022	Coaticook.....	6,341	6,492
Lancaster.....	1	12,371	Contrecoeur.....	1,435	1,662
Marysville.....	2,152	2,538	Cookshire.....	1,209	1,315
Milltown.....	2,267	1,975	Côte-St-Luc.....	1,083	5,914
Moncton.....	27,334	36,003	Courville.....	3,138	3,772
Newcastle.....	4,248	4,670	Cowansville.....	4,431	5,242
St. Andrews.....	1,458	1,534	Crabtree.....	983	1,103
St. George.....	1,263	1,322	Danville.....	2,092	2,296
St. Leonard.....	1,419	1,593	Deschailions-sur-St. Laurent.....	1,185	1,266
St. Stephen.....	3,769	3,491	Deschambault.....	954	1,002
Sackville.....	2,873	2,849	Deschênes.....	1,169	1,680
Saint John.....	50,779	52,491	Disraeli.....	2,145	2,473
Shediac.....	2,010	2,173	Dolbeau.....	4,307	5,079
Shippegan.....	1,181	1,362	Donnacona.....	3,663	4,147
Sussex.....	3,224	3,403	Dorion.....	2,413	3,089
Woodstock.....	3,996	4,308	Dorval.....	5,293	14,055
			Drummondville.....	14,341	26,284
			Drummondville W.....	1,275	1,606
Quebec—			Duparquet.....	1,485	1,144
Acton Vale.....	3,367	3,547	East Angus.....	3,714	4,239
Alma.....	7,975	10,822	East Broughton Station.....	1	1,060
Amos.....	4,265	5,145	Farnham.....	4,926	5,843
Amqui.....	2,599	3,247	Ferme-Neuve.....	1,660	1,891
Anjou.....	1,501 ^a	2,140	Forestville.....	709	1,117
Arthabaska.....	2,321	2,399	Fort Chambly.....	1,636	1,885
Arvida.....	11,078	12,919	Fort Coulonge.....	1,431	1,633
Asbestos.....	8,190	8,969	Gaspe.....	1,692	2,194
Ayersville.....	1	2,348	Gatineau.....	5,771	8,423
Aylmer.....	4,375	5,294	Giffard.....	8,097	9,964
Bagotville.....	4,136	4,822	Granby.....	21,989	27,095
Baie Comeau.....	3,972	4,332	Grande-Rivière.....	932	1,024
Baie de Shawinigan.....	1,223	1,137	Grand'Mère.....	11,089	14,023
Baie d'Urfee.....	719	1,838	Greenfield Park.....	3,379	4,417
Baie St. Paul.....	3,716	4,052	Grenville.....	1,069	1,277
Barraute.....	500	1,081			

For footnotes, see end of table, p. 132.

**10.—Incorporated Cities, Towns and Villages having Populations of 1,000 or Over,
by Province, Census Years 1951 and 1956—continued**

Province and Incorporated Centre	1951	1956	Province and Incorporated Centre	1951	1956
	No.	No.		No.	No.
Quebec—continued			Quebec—continued		
Hampstead.....	3,260	4,355	Mount Royal.....	11,352	16,990
Hauptervie.....	283	1,762	Murdochville.....	1	1,694
Hébertville Station.....	1,038	1,214	Napierville.....	1,356	1,510
Hudson.....	1,283	1,549	Naudville.....	1,430	2,894
Hudson Heights.....	925	1,289	Nicolet.....	4,084	3,771
Hull.....	43,483	49,243	Noranda.....	9,672	10,323
Huntingdon.....	2,806	2,995	Normandin.....	1,678	1,918
Iberville.....	5,185	6,270	Notre-Dame-d'Hébertville.....	1,285	1,542
Île-Perrot.....	2,008 ^a	2,600	Notre-Dame-de-Lorette.....	2,516	3,464
Isle Malgine.....	482	1,761	Notre-Dame-de-Portneuf.....	1,144	1,251
Jacques-Cartier.....	22,450	33,132	Notre-Dame-du-Lac.....	1,364	1,512
Joliette.....	16,064	16,940	Ormstown.....	1,233	1,347
Jonquière.....	21,618	25,550	Outremont.....	30,057	29,990
Kénogami.....	9,895	11,309	Papineauville.....	1,024	1,141
Knowlton.....	1,094	1,328	Parent.....	1,255	1,443
Labelle.....	1,003	1,150	Pierreville.....	1,448	1,589
L'Abord-à-Plouffe.....	4,604	8,099	Pincourt.....	521	1,437
Lac-au-Saumon.....	1,622	1,681	Plessisville.....	5,094	5,829
Lachine.....	27,773	34,494	Pointe-à-Gatineau.....	3,874	6,175
Lachute.....	6,179	6,911	Pointe-au-Pic.....	1,105	1,220
Lacolle.....	1,055	1,141	Pointe-aux-Trembles.....	8,241	11,981
La Guadeloupe.....	1,321	1,487	Pointe Claire.....	8,753	15,208
La Malbaie.....	2,466	2,817	Pont Rouge.....	2,413	2,631
La Pérade.....	1,111	1,282	Pont Viau.....	5,129	8,218
La Petite-Rivière.....	740 ^a	1,353	Port Alfred.....	8,937	7,968
La Prairie.....	4,058	5,372	Price.....	2,810	3,140
La Providence.....	2,693	3,826	Princeville.....	1,967	2,841
Lasalle.....	11,633	18,973	Quebec.....	164,016	170,703
La Sarre.....	2,744	3,155	Quebec W.....	7,295	7,645
L'Assomption.....	2,688	3,683	Rawdon.....	1,912	2,049
La Tuque.....	9,538	11,096	Richelieu.....	1,129	1,398
Laurentides.....	1,465	1,513	Richmond.....	3,471	3,849
Lauroz.....	9,643	10,255	Rigaud.....	1,579	1,784
Laval-des-Rapides.....	4,998	11,248	Rimouski.....	11,565	14,630
Laval W.....	1,935	3,818	Rimouski E.....	889	1,209
Le Moine.....	4,078	5,662	Rivière-des-Prairies.....	4,072	6,806
Lennoxville.....	2,895	3,149	Rivière-du-Loup.....	9,425	9,964
L'Épiphanie.....	2,462	2,671	Rivière-du-Moulin.....	2,685	4,138
Léry.....	1,194	1,573	Robertsonville.....	665	1,030
Lévis.....	13,162	13,644	Roberval.....	4,897	6,648
Linéire.....	949	1,149	Rock Island.....	1,646	1,608
L'Isletville.....	830	1,051	Rouyn.....	14,633	17,076
L'Isle-Verte.....	1	1,456	Roxboro.....	459	1,910
Longueuil.....	11,103	14,332	Roxton Falls.....	945	1,023
Loretteville.....	4,382	4,957	Ste. Adele.....	961	1,309
Louiseville.....	4,088	4,392	St. Agapitville.....	922	1,079
Luceville.....	1,059	1,265	St. Agathe-des-Monts.....	5,169	5,173
Lyster.....	961	1,010	St. Ambroise.....	1,032	1,305
Macamic.....	1,123	1,388	St. Anne-de-Beaupré.....	1,827	1,865
Mackayville.....	6,494	9,958	St. Anne-de-Bellevue.....	3,342	3,847
Magog.....	12,423	12,720	St. Anselme.....	991	1,086
Malartic.....	5,983	6,818	St. Antoine-des-Laurentides.....	1	2,092
Maniwaki.....	3,835	5,399	St. Basile S.....	1,347	1,635
Maple Grove.....	847	1,115	St. Casimir.....	1,334	1,447
Marieville.....	3,117	3,478	St. Césaire.....	1,658	1,739
Masson.....	1,475	1,656	St. Coeur-de-Marie.....	1,061	1,282
Matane.....	6,345	8,069	St. Croix.....	1,080	1,241
McMasterville.....	1,509	1,738	St. Cyrille.....	1,189	1,198
Mégantic.....	6,164	6,864	St. Dorothee.....	726	1,158
Melocheville ^a	1,300	1,422	St. Elzéar.....	1,596 ^a	2,589
Mistassini.....	2,298	2,912	St. Emile.....	1,415 ^a	1,645
Montebello.....	1,397	1,287	St. Emilien.....	1,651	2,014
Mont Joli.....	4,938	6,179	St. Eustache.....	2,615	3,740
Mont Laurier.....	4,701	5,486	St. Eustache-sur-le-Lac.....	3,211	5,830
Montmagny.....	5,844	6,405	St. Félixien.....	2,656	4,152
Montmorency.....	5,817	6,077	St. Felix-de-Valois.....	1,201	1,323
Montreal.....	1,021,520	1,109,439	St. Foy.....	5,236	14,615
Montreal E.....	4,513	4,607	St. Fulgence.....	902	1,054
Montreal N.....	14,081	25,407	St. Gabriel-de-Brandon.....	2,661	3,265
Montreal S.....	4,214	5,319	St. Geneviève-de-Pierrefonds.....	1,322	2,441
Montreal W.....	3,721	4,370	St. Georges (Beauce Co.).....	2,657	3,197

For footnotes, see end of table, p. 132.

**10.—Incorporated Cities, Towns and Villages having Populations of 1,000 or Over,
by Province, Census Years 1951 and 1956—continued**

Province and Incorporated Centre	1951	1956	Province and Incorporated Centre	1951	1956
	No.	No.		No.	No.
Quebec—continued			Quebec—concluded		
St. Georges (Champlain Co.)...	1,143	1,454	Villeneuve ^a	1,096	1,417
St. Georges W. (Beauce Co.)....	2,691	3,643	Warwick.....	2,094	2,248
St. Hilaire.....	1,436	2,000	Waterloo.....	4,054	4,266
St. Hyacinthe.....	20,236	20,439	Waterville.....	1,205	1,373
St. Jacques.....	1,729	1,979	Weedon Centre.....	1,066	1,287
St. Jean.....	19,305	24,367	Westmount.....	25,222	24,800
St. Jean-de-Boischatel.....	1,297	1,461	Windsor.....	4,714	5,886
St. Jean-Eudes.....	5	2,560			
St. Jérôme (Lac St. Jean Co.)....	1,480	1,505	Ontario—		
St. Jérôme (Terrebonne Co.)....	17,685	20,645	Acton.....	2,880	3,578
St. Joseph (Beauce Co.).....	2,417	2,484	Ajax.....	4,168 ^a	5,683
St. Joseph (St. Hyacinthe Co.)...	2,122	2,708	Alexandria.....	2,204	2,487
St. Joseph-de-la-Rivière-Bleue...	1,334	1,481	Alfred.....	1	1,257
St. Joseph-de-Sorel.....	3,349	3,571	Alliston.....	1,987	2,426
St. Jovite.....	1,453	1,613	Almonte.....	2,672	2,960
St. Lambert.....	8,615	12,224	Amherstburg.....	3,638	4,099
St. Laurent.....	20,426	38,291	Arnprior.....	4,381	5,137
St. Marc-des-Carrières.....	2,351	2,457	Arthur.....	1,088	1,124
Ste. Marie.....	2,431	3,094	Aurora.....	3,358	3,957
St. Martin.....	1	6,440	Aylmer.....	3,483	4,201
St. Michel (Montreal Island)....	10,539	24,706	Bancroft.....	1,334	1,669
St. Noël.....	830	1,027	Barrie.....	12,514	16,851
St. Pacôme.....	1,197	1,283	Barry's Bay.....	1,218	1,366
St. Pascal.....	1,736	1,962	Beamsville.....	1,712	2,198
St. Pie.....	1,182	1,228	Beaverton.....	1,048	1,099
St. Pierre (Montreal Island)....	4,976	5,276	Belle River.....	1,431	1,814
St. Raphaël.....	955	1,059	Belleville.....	19,519	20,605
St. Raymond.....	3,139	3,502	Blenheim.....	2,459	2,844
St. Remi.....	1,845	2,303	Blind River.....	2,512	3,633
Ste. Rosalie.....	1,638	1,142	Bobcaygeon.....	1,207	1,242
Ste. Rose.....	3,660	5,378	Bolton.....	820	1,093
St. Sauveur-des-Monts.....	1,066	1,316	Bowmanville.....	5,430	6,544
St. Siméon.....	1,103	1,114	Bracebridge.....	2,684	2,849
Ste. Thècle.....	1,468	1,499	Bradford.....	1,483	2,010
Ste. Thérèse.....	7,038	8,266	Brampton.....	8,389	12,587
St. Tite.....	2,856	3,183	Brantford.....	36,727	51,869
St. Vincent-de-Paul.....	1	6,784	Bridgeport.....	1,137	1,402
Sayabec.....	2,220	2,281	Brighton.....	1,967	2,182
Schefferville.....	1	1,632	Brockville.....	12,301	13,885
Scotstown.....	1,350	1,347	Bronte.....	1	2,024
Semeterre.....	1,686	2,197	Burlington.....	6,017	9,127
Sept-Îles.....	1,866	5,592	Burlington Beach.....	2,827	3,314
Shawinigan East.....	1	2,451	Caledonia.....	1,681	2,078
Shawinigan Falls.....	26,903	28,597	Campbellford.....	3,235	3,425
Shawinigan South.....	6,637	10,947	Capreol.....	2,002	2,394
Shawville.....	1,159	1,281	Cardinal.....	1,782	1,994
Sherbrooke.....	50,543	58,668	Carleton Place.....	4,725	4,790
Sillery.....	10,376	13,154	Casselman.....	1,158	1,241
Sorel.....	14,961	16,476	Chatham.....	21,218	22,262
Stanstead Plain.....	995	1,134	Chelmsford.....	1,210	2,142
Sutton.....	1,389	1,407	Chesley.....	1,672	1,629
Tadoussac.....	1,064	1,066	Chesterville.....	1,094	1,169
Témiscaming.....	2,787	2,691	Chippewa.....	1,762	2,039
Templeton.....	1,717	2,475	Clinton.....	2,547	2,896
Terrebonne.....	3,200	4,097	Cobalt.....	2,230	2,367
Thetford Mines.....	15,095	19,511	Cobourg.....	7,470	9,399
Three Rivers.....	46,074	50,483	Cochrane.....	3,401	3,695
Thurso.....	1,973	2,324	Colborne.....	1,108	1,240
Tracy.....	3,847 ¹	6,542	Collingwood.....	7,413	7,978
Tring-Jonction.....	751	1,083	Coniston.....	2,292	2,478
Trois-Pistoles.....	3,537	4,039	Copper Cliff.....	3,974	3,801
Val-David.....	940	1,016	Cornwall.....	16,899	18,158
Val-d'Or.....	8,685	9,876	Crystal Beach.....	1,204	1,850
Vallée-Jonction.....	1,279	1,340	Delhi.....	2,517	3,002
Valleyfield (Salaberry-de-).....	22,414	23,584	Deseronto.....	1,522	1,729
Val-St. Michel.....	689	1,140	Dresden.....	2,052	2,260
Varennes.....	1,104	2,047	Dryden.....	2,627	4,428
Verchères.....	1,201	1,412	Dundas.....	6,846	9,507
Verdun.....	77,391	78,262	Dunnville.....	4,476	4,776
Victoriaville.....	13,124	16,031	Durham.....	1,839	2,067
Ville-Marie.....	1,316	1,409	Eastview.....	13,799	19,283

For footnotes, see end of table, p. 132.

**10.—Incorporated Cities, Towns and Villages having Populations of 1,000 or Over,
by Province, Census Years 1951 and 1956—continued**

Province and Incorporated Centre	1951	1956	Province and Incorporated Centre	1951	1956
	No.	No.		No.	No.
Ontario—continued			Ontario—continued		
Eganville.....	1,326	1,598	Mount Forest.....	2,291	2,438
Elmira.....	2,589	2,916	Napanee.....	3,897	4,273
Elora.....	1,348	1,457	Newcastle.....	958	1,098
Englehart.....	1,585	1,705	New Hamburg.....	1,738	1,939
Essex.....	2,741	3,348	New Liskeard.....	4,215	4,619
Exeter.....	2,547	2,655	Newmarket.....	5,356	7,368
Fenelon Falls.....	1,304	1,137	New Toronto.....	11,194	11,560
Fergus.....	3,387	3,677	Niagara.....	2,108	2,740
Fonthill.....	1,412	1,872	Niagara Falls.....	22,874	23,563
Forest.....	1,790	2,035	North Bay.....	17,944	21,020
Forest Hill.....	15,305	19,450	Norwich.....	1,439	1,611
Fort Erie.....	7,572	8,632	Norwood.....	925	1,017
Fort Frances.....	8,038	9,005	Oakville.....	6,910	9,983
Fort William.....	34,947	39,464	Orangeville.....	3,249	3,887
Frankford.....	1,393	1,491	Orillia.....	12,110	13,857
Galt.....	19,207	23,738	Oshawa.....	41,545	50,412
Gananoque.....	4,572	4,981	Ottawa.....	202,045	222,129
Georgetown.....	3,452	5,942	Owen Sound.....	16,423	16,976
Geraldton.....	3,227	3,263	Palmerston.....	1,573	1,550
Glencoe.....	979	1,044	Paris.....	5,249	5,504
Goderich.....	4,934	5,886	Parkhill.....	991	1,043
Gravenhurst.....	3,005	3,014	Parry Sound.....	5,183	5,378
Grimsby.....	2,773	3,805	Pembroke.....	12,704	15,434
Guelph.....	27,386	33,860	Penetanguishene.....	4,949	5,420
Hagersville.....	1,746	1,964	Perth.....	5,034	5,145
Haileybury.....	2,346	2,654	Peterborough.....	38,272	42,698
Hamilton.....	208,321	239,625	Petrolia.....	3,105	3,426
Hanover.....	3,533	3,943	Pickering.....	1	1,150
Harriston.....	1,494	1,592	Pictou.....	4,287	4,998
Harrow.....	1,519	1,851	Point Edward.....	1,838	2,558
Havelock.....	1,132	1,205	Port Arthur.....	31,161	38,136
Hawkesbury.....	7,194	7,929	Port Colborne.....	8,275	14,028
Hearst.....	1,723	2,214	Port Credit.....	3,643	6,350
Hespeler.....	3,862	3,876	Port Dalhousie.....	2,616	3,087
Huntsville.....	3,286	3,051	Port Dover.....	2,440	2,790
Ingersoll.....	6,524	6,811	Port Elgin.....	1,558	1,597
Iroquois.....	1,086	1,078	Port Hope.....	6,548	7,522
Iroquois Falls.....	1,342	1,478	Port Perry.....	1,721	2,121
Kapuskasing.....	4,687	5,463	Port Stanley.....	1,491	1,480
KeeWatIn.....	1,634	1,949	Prescott.....	3,518	4,920
Kemptville.....	1,488	1,730	Preston.....	7,619	9,387
Kenora.....	8,695	10,278	Rainy River.....	1,348	1,354
Kincardine.....	2,672	2,667	Renfrew.....	7,360	8,634
Kingston.....	33,459	48,618	Richmond Hill.....	2,164	6,677
Kingsville.....	2,631	2,884	Ridgetown.....	2,365	2,483
Kitchener.....	44,867	59,562	Riverside.....	9,214	13,335
Lakefield.....	1,710	1,938	Rockcliffe Park.....	1,595	2,097
La Salle.....	1,854	2,703	Rockland.....	2,348	2,757
Leamington.....	6,950	7,856	Rodney.....	885	1,026
Leaside.....	16,233	16,538	St. Catharines.....	37,984	39,708
Levack.....	1,833	2,929	St. Mary's.....	3,995	4,185
Lindsay.....	9,603	10,110	St. Thomas.....	18,173	19,129
Listowel.....	3,469	3,644	Sarnia.....	34,697	43,447
Little Current.....	1,397	1,514	Sault Ste. Marie.....	32,452	37,329
Lively.....	1	2,840	Seaforth.....	2,118	2,128
London.....	95,343	101,693	Shelburne.....	1,184	1,245
Long Branch.....	8,727	10,249	Simcoe.....	7,269	8,078
L'Orignal.....	967	1,067	Sioux Lookout.....	2,364	2,504
Madoc.....	1,240	1,325	Smith's Falls.....	8,441	8,967
Markham.....	1,606	2,873	Smooth Rock Falls.....	1,102	1,104
Marmora.....	1,117	1,428	Southampton.....	1,700	1,640
Massey.....	937	1,068	Stayner.....	1,280	1,429
Mattawa.....	3,097	3,208	Stirling.....	1,100	1,191
Meaford.....	3,178	3,643	Stoney Creek.....	1,922	4,506
Merriton.....	4,714	5,404	Stouffville.....	1,695	2,307
Midland.....	7,206	8,250	Stratford.....	18,785	19,972
Milton.....	2,451	4,294	Strathroy.....	3,708	4,240
Milverton.....	1,055	1,070	Streetsville.....	1,139	2,648
Mimico.....	11,342	13,687	Sturgeon Falls.....	4,962	5,874
Mitchell.....	1,979	2,146	Sudbury.....	42,410	46,482
Morrisburg.....	1,858	2,131	Sutton.....	1,168	1,310

For footnotes, see end of table, p. 132.

**10.—Incorporated Cities, Towns and Villages having Populations of 1,000 or Over,
by Province, Census Years 1951 and 1956—continued**

Province and Incorporated Centre	1951	1956	Province and Incorporated Centre	1951	1956
	No.	No.		No.	No.
Ontario—concluded			Saskatchewan—		
Swansea.....	8,072	8,595	Assiniboia.....	1,938	2,027
Tavistock.....	1,094	1,155	Battleford.....	1,319	1,498
Tecumseh.....	3,543	4,209	Biggar.....	2,214	2,424
Thamesville.....	968	1,074	Canora.....	1,568	1,873
Thessalon.....	1,595	1,716	Creighton.....	1	1,659
Thornbury.....	971	1,037	Estevan.....	3,935	5,264
Thorold.....	6,397	8,053	Eston.....	1,301	1,625
Tilbury.....	2,682	3,138	Fort Qu'Appelle.....	878	1,130
Tillsonburg.....	5,330	6,216	Gravelbourg.....	1,197	1,434
Timmins.....	27,743	27,551	Grenfell.....	1,007	1,080
Toronto.....	675,754	667,706	Gull Lake.....	728	1,052
Trenton.....	10,085	11,492	Hudson Bay.....	1,115	1,421
Tweed.....	1,562	1,634	Humboldt.....	2,435	2,916
Uxbridge.....	1,785	2,065	Indian Head.....	1,569	1,721
Vankleek Hill.....	1,480	1,647	Kamsack.....	2,327	2,843
Victoria Harbour.....	953	1,012	Kerrobert.....	807	1,037
Walkerton.....	3,264	3,698	Kindersley.....	1,755	2,572
Wallaceburg.....	7,688	7,892	Leader.....	835	1,085
Waterdown.....	1,347	1,754	Lloydminster.....	3,938	5,077
Waterford.....	1,745	1,908	Maple Creek.....	1,638	1,974
Waterloo.....	11,991	16,373	Meadow Lake.....	1,956	2,477
Watford.....	1,201	1,217	Melfort.....	2,919	3,322
Welland.....	15,382	16,405	Melville.....	4,458	4,948
Wellington.....	982	1,077	Moose Jaw.....	24,355	29,603
West Lorne.....	1,031	1,088	Moosomin.....	1,235	1,390
Weston.....	8,677	9,543	Nipawin.....	3,050	3,337
Wheatley.....	1,021	1,196	North Battleford.....	7,473	8,924
Whitby.....	7,267	9,995	Prince Albert.....	17,149	20,366
Warton.....	1,955	1,954	Radville.....	973	1,087
Winchester.....	1,201	1,338	Regina.....	71,319	89,755
Windsor.....	120,049	121,980	Rosetown.....	1,865	2,262
Wingham.....	2,642	2,766	Rosthern.....	1,183	1,268
Woodbridge.....	1,699	1,958	Saskatoon.....	53,268	72,858
Woodstock.....	15,544	18,347	Shamavon.....	1,625	1,959
			Swift Current.....	7,458	10,612
			Tisdale.....	2,141	2,104
			Unity.....	1,248	1,607
			Wadena.....	1,081	1,154
			Watrous.....	1,228	1,340
			Weyburn.....	7,148	7,684
			Wilkie.....	1,580	1,630
			Wolseley.....	983	1,001
			Wynyard.....	1,326	1,522
			Yorkton.....	7,074	8,256
Manitoba—			Alberta—		
Altona.....	1,438	1,698	Athabasca.....	1,068	1,293
Beauséjour.....	1,376	1,523	Barrhead.....	1,243	1,610
Boissevain.....	1,015	1,115	Beverly.....	2,159	4,602
Brandon.....	20,598	24,796	Blairmore.....	1,933	1,973
Brooklands.....	2,915	3,941	Bonnyville.....	1,139	1,495
Carberry.....	912	1,065	Bow Island.....	653	1,001
Carman.....	1,867	1,884	Bowness.....	2,922	6,217
Dauphin.....	6,007	6,190	Brooks.....	1,648	2,320
Flin Flon.....	9,899	10,234	Calgary.....	129,060	181,780
Gimli.....	1,324	1,660	Camrose.....	4,131	5,817
Killarney.....	1,262	1,434	Cardston.....	2,487	2,607
Minnedosa.....	2,085	2,306	Claresholm.....	1,608	2,431
Morden.....	1,862	2,237	Coaldale.....	806	2,327
Morris.....	1,193	1,260	Cold Lake.....	1	1,097
Neepawa.....	2,895	3,109	Coleman.....	1,961	1,566
Portage la Prairie.....	8,511	10,525	Devon.....	842	1,429
Powerview.....	1,075	1,078	Didsbury.....	1,180	1,227
Rivers.....	1,209	1,422	Drayton Valley.....	1	2,588
Roblin.....	1,055	1,173	Drumheller.....	2,601	2,632
Russell.....	1,100	1,227	Edmonton.....	159,631	226,002
St. Boniface.....	26,342	28,851	Edson.....	1,956	2,560
St. James.....	19,561 ^a	26,502	Fairview.....	1,926	1,260
Selkirk.....	6,218	7,413	Forest Lawn.....	1,079	3,150
Souris.....	1,584	1,759	Fort Macleod.....	1,860	2,103
Steinbach.....	2,155	2,688			
Stonewall.....	1,040	1,110			
Swan River.....	2,290	2,644			
The Pas.....	3,376	3,971			
Transcona.....	6,752	8,312			
Tuxedo.....	1,627	1,163			
Virten.....	1,746	3,225			
Winkler.....	1,331	1,634			
Winnipeg.....	235,710	255,093			

For footnotes, see end of table, p. 132.

**10.—Incorporated Cities, Towns and Villages having Populations of 1,000 or Over,
by Province, Census Years 1951 and 1956—concluded**

Province and Incorporated Centre	1951	1956	Province and Incorporated Centre	1951	1956
	No.	No.		No.	No.
Alberta—concluded			British Columbia—concluded		
Fort Saskatchewan.....	1,076	2,582	Cumberland.....	971	1,039
Grande Prairie.....	2,664	6,302	Dawson Creek.....	3,589	7,531
Hanna.....	2,027	2,327	Duncan.....	2,784	3,247
High Prairie.....	1,141	1,743	Fernie.....	2,551	2,808
High River.....	1,888	2,102	Fort St. John.....	884	1,908
Innisfail.....	1,417	1,883	Grand Forks.....	1,646	1,995
Jasper Place.....	9,139	15,957	Hope.....	1,668	2,226
Lacombe.....	2,277	2,747	Kamloops.....	8,099	9,096
Leduc.....	1,842	2,008	Kelowna.....	8,517	9,181
Lethbridge.....	22,947	29,462	Kimberley.....	5,933	5,774
Magrath.....	1,320	1,382	Kinnaird.....	947	1,305
McLennan.....	1,074	1,062	Ladysmith.....	2,094	2,107
McMurray.....	926	1,110	Lake Cowichan.....	1,628	1,949
Medicine Hat.....	16,364	20,826	Langley.....	1	2,131
Nanton.....	934	1,047	Lillooet.....	469	1,083
Olds.....	1,617	1,980	Merritt.....	1,251	1,790
Pease River.....	1,672	2,034	Mission City.....	2,668	3,010
Pincher Creek.....	1,456	1,729	Nanaimo.....	7,196	12,705
Ponoka.....	2,574	3,387	Nelson.....	6,772	7,226
Raymond.....	2,279	2,399	New Westminster.....	28,639	31,665
Redcliff.....	1,538	2,001	North Kamloops.....	1,979	4,398
Red Deer.....	7,575	12,338	North Vancouver.....	15,687	19,951
Redwater.....	1,306	1,065	Oliver.....	1,000	1,147
Rocky Mountain House.....	1,147	1,285	Parksville.....	882	1,112
St. Albert.....	1,129	1,320	Penticton.....	10,548	11,894
St. Paul.....	1,407	2,229	Port Alberni.....	7,845	10,373
Stettler.....	2,442	3,359	Port Coquitlam.....	3,232	4,632
Stony Plain.....	878	1,098	Port Moody.....	2,246	2,713
Sylvan Lake.....	985	1,114	Prince George.....	4,703	10,563
Taber.....	3,042	3,688	Prince Rupert.....	8,546	10,498
Three Hills.....	1,026	1,095	Princeston.....	1	2,245
Vegreville.....	2,223	2,574	Quesnel.....	1,587	4,384
Vermilion.....	1,982	2,196	Revelstoke.....	2,917	3,469
Vulcan.....	1,040	1,204	Roseland.....	4,604	4,344
Wainwright.....	1,996	2,653	Salmon Arm.....	1,201	1,344
Westlock.....	1,111	1,136	Sidney.....	1	1,371
Wetaskiwin.....	3,824	4,476	Smithers.....	1,204	1,962
			Squamish.....	589	1,292
British Columbia—			Terrace.....	961	1,473
Alberni.....	3,323	3,947	Trail.....	11,430	11,395
Armstrong.....	1,126	1,197	Vancouver.....	344,833	365,844
Burns Lake.....	801	1,016	Vanderhoof.....	644	1,085
Campbell River.....	1,986	3,069	Vernon.....	7,822	8,998
Castlegar.....	1,329	1,705	Victoria.....	51,331	54,584
Chilliwack.....	5,663	7,297	Warfield.....	1	2,051
Comox.....	714	1,151	William's Lake.....	913	1,790
Courtenay.....	2,553	3,025			
Cranbrook.....	3,621	4,562	Yukon—		
Creston.....	1,626	1,844	Whitehorse.....	2,594	2,570

¹ Not incorporated in 1951.

² Towns of Corner Brook E., Corner Brook W. and Curling amalgamated

to form part of Corner Brook city Jan. 1, 1956.

³ Rural District in 1951.

⁴ Rural municipality of

St. Leonard-de-Port-Maurice in 1951.

⁵ Rural municipality in 1951.

⁶ Previous to 1953 called Lac-

St. Louis.

⁷ Rural municipality of St. Joseph in 1951.

⁸ Previous to June 16, 1951 called Beauport E.

⁹ Improvement District in 1951.

Section 9.—Sex and Age Distribution

Sex.—The sex distribution of the Canadian people has been characterized since early colonial times by a preponderance of males although this condition has been greatly modified in more recent years. In 1666 during the early years of settlement by French immigrants 63.3 p.c. of the population were males. In 1784 when British immigration to Canada was commencing there were 54,064 males and 50,759 females and by the middle of the 19th century there were 449,967 males to 440,294 females in Lower Canada and 499,067 males to 452,937 females in the more newly settled Upper Canada.

Since Confederation the newer sections of Canada—the west and the northwest—have shown the greatest excess of males. From 1871 to 1941, for Canada as a whole, the proportion of males never dropped below 51 p.c. of the total population whereas for Western Canada it varied between 53 p.c. and 59 p.c. By 1951, however, the proportion of males to the total population had dropped to 50.6 p.c. for Canada as a whole and in 1956 was 50.7 p.c.

11.—Sex Distribution of the Population by Province, Decennial Census Years 1931-51 and 1956

NOTE.—Figures for the census years 1871-1921 are given in the 1948-49 Year Book, p. 150.

Province or Territory	1931		1941		1951		1956	
	Male	Female	Male	Female	Male	Female	Male	Female
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland....	...	...	...	...	185,143	176,273	213,905	201,169
P. E. Island.....	45,392	42,646	49,228	45,819	50,218	48,211	50,510	48,775
Nova Scotia.....	263,104	249,742	296,044	281,918	324,955	317,629	353,182	341,535
New Brunswick...	208,620	199,599	234,097	223,304	259,211	256,486	279,590	275,026
Quebec.....	1,447,326	1,427,336	1,672,982	1,658,900	2,022,127	2,033,554	2,317,677	2,310,701
Ontario.....	1,748,844	1,682,839	1,921,201	1,866,454	2,314,170	2,283,372	2,721,519	2,683,414
Manitoba.....	368,065	332,074	378,079	351,665	394,818	381,723	432,478	417,562
Saskatchewan.....	499,935	421,850	477,563	418,429	434,568	397,160	458,428	422,237
Alberta.....	400,199	331,406	426,458	369,711	492,192	447,309	585,921	537,195
British Columbia .	385,219	309,044	435,031	382,830	596,961	568,249	720,516	677,948
Yukon.....	2,825	1,405	3,153	1,761	5,457	3,639	6,924	5,266
N.W.T.....	5,012	4,304	6,700	5,328	9,053	6,951	11,229	8,084
Canada.....	5,374,541	5,002,245	5,900,536	5,606,119	7,088,873	6,920,556	8,151,879	7,928,912

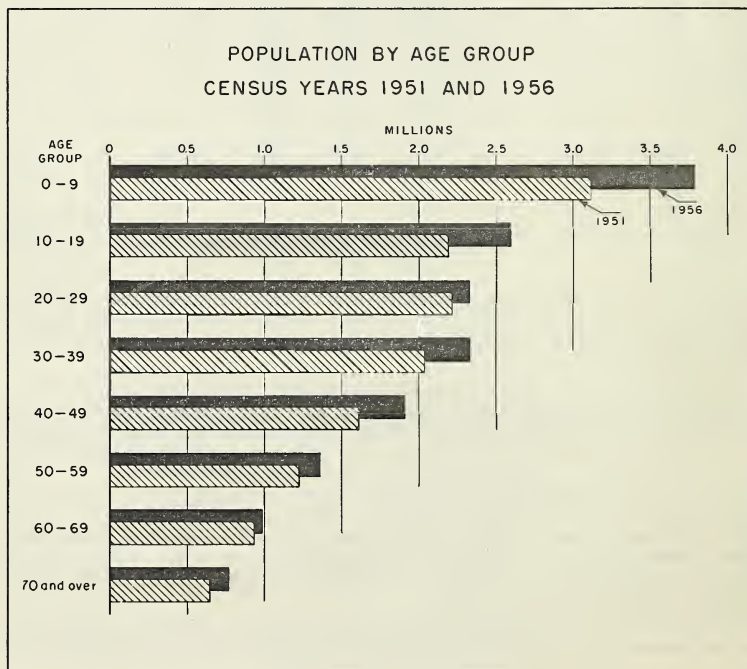
Age.—The age distribution of a population is fundamental to most, if not all, other analyses, for the age factor influences employment, marriage, birth rates and death rates, education, immigration, criminology, and a multitude of events and activities that are of great importance in the national life.

Recent trends in vital rates and immigration have considerably changed the age composition of the population of Canada. A high birth rate together with a low death rate among children has added, between 1951 and 1956, nearly 1,000,000 to the population under 15 years of age and raised the proportion of this group to the total population from 30.3 p.c. to 32.5 p.c. On the other hand, the relative proportion of the working-age groups—persons from 15 to 64 years of age—was 2 p.c. lower at 59.8 p.c. in 1956 than in 1951 when 61.9 p.c. were in this age group. Without the influx of immigrants during the 1951-56 period, the proportion of this productive group would have been much lower since a large part of it consists of the survivors of those born in the 1930's when birth rates were at their lowest. The proportion of persons 65 years of age or over was slightly less than 8 p.c. at both census dates.

Table 12 shows the population of Canada classified by five-year age groups and sex for the census years 1941, 1951 and 1956. The provincial distribution by specified age groups as recorded in the 1956 Census is shown in Table 13.

12.—Male and Female Populations by Age Group, Census Years 1941, 1951 and 1956

Age Group	1941		1951		1956	
	Male	Female	Male	Female	Male	Female
	No.	No.	No.	No.	No.	No.
0 - 4 years.....	533,903	517,951	879,063	843,046	1,011,835	971,728
5 - 9 ".....	529,092	516,728	713,873	683,952	919,952	887,101
10 - 14 ".....	556,304	544,573	575,122	555,661	732,032	702,562
15 - 19 ".....	565,212	554,823	532,180	525,792	586,635	575,666
20 - 24 ".....	517,956	514,470	537,535	551,106	567,179	561,931
25 - 29 ".....	488,340	478,650	552,812	578,403	605,836	592,301
30 - 34 ".....	431,591	412,255	512,557	530,177	602,535	613,750
35 - 39 ".....	396,453	363,101	503,571	495,562	555,763	558,622
40 - 44 ".....	348,616	327,929	445,800	422,767	522,615	502,784
45 - 49 ".....	332,503	302,643	387,708	356,971	455,827	422,988
50 - 54 ".....	315,866	275,838	340,461	322,195	381,835	351,215
55 - 59 ".....	275,234	231,658	292,564	278,126	321,973	307,271
60 - 64 ".....	218,557	188,594	264,324	241,828	265,652	259,265
65 - 69 ".....	162,517	145,207	228,076	205,421	237,551	226,562
70 - 74 ".....	111,152	105,949	160,398	154,674	187,490	183,218
75 - 79 ".....	67,200	68,495	94,130	94,261	113,550	113,948
80 - 84 ".....	34,083	37,431	45,963	50,828	55,636	61,460
85 - 89 ".....	12,621	15,015	17,539	22,060	21,688	26,670
90 years or over.....	3,336	4,809	5,197	7,726	6,295	9,870
Totals.....	5,900,536	5,606,119	7,088,873	6,920,556	8,151,879	7,928,912



13.—Age Distribution of the Population by Province, Census 1956

Province or Territory	0-4 Years	5-9 Years	10-14 Years	15-19 Years	20-24 Years	25-34 Years
	No.	No.	No.	No.	No.	No.
Newfoundland.....	63,374	59,539	45,997	35,660	30,018	52,207
Prince Edward Island.....	12,285	12,521	9,828	8,190	6,147	11,002
Nova Scotia.....	85,972	82,033	67,566	56,326	49,069	90,428
New Brunswick.....	74,299	73,034	57,938	47,048	36,421	69,286
Quebec.....	597,728	556,621	467,237	370,246	353,191	707,106
Ontario.....	628,825	563,678	425,922	346,850	365,160	856,108
Manitoba.....	100,367	91,460	72,516	60,427	57,674	121,608
Saskatchewan.....	109,603	97,953	79,214	68,359	58,992	120,182
Alberta.....	149,697	125,820	97,318	80,486	82,842	173,475
British Columbia.....	156,759	140,588	108,518	86,433	86,397	206,736
Yukon Territory.....	1,847	1,335	795	623	1,134	2,739
Northwest Territories.....	2,807	2,471	1,745	1,653	2,065	3,545
Canada.....	1,933,563	1,807,053	1,434,594	1,162,301	1,129,110	2,414,422
	35-44 Years	45-54 Years	55-64 Years	65-69 Years	70+ Years	All Ages
	No.	No.	No.	No.	No.	No.
Newfoundland.....	47,866	32,441	23,183	8,911	15,878	415,074
Prince Edward Island.....	11,688	9,335	7,939	3,325	7,025	99,285
Nova Scotia.....	89,889	65,755	48,772	19,926	38,981	694,717
New Brunswick.....	66,500	49,607	37,291	15,348	27,844	554,616
Quebec.....	587,601	436,476	288,149	103,607	160,416	4,628,378
Ontario.....	751,882	581,506	430,627	167,371	287,004	5,404,933
Manitoba.....	115,396	87,941	66,084	29,240	47,327	850,040
Saskatchewan.....	114,626	87,351	65,739	30,108	48,538	880,665
Alberta.....	148,334	108,779	75,038	31,796	49,531	1,123,116
British Columbia.....	202,007	150,188	110,059	54,078	96,701	1,398,464
Yukon Territory.....	1,747	1,004	476	191	299	12,190
Northwest Territories.....	2,248	1,482	804	212	281	19,313
Canada.....	2,139,784	1,611,865	1,154,161	464,113	779,825	16,680,791

Section 10.—Marital Status

Next to the sex and age distribution of a population, that of marital status is probably most fundamental from a vital, economic and social viewpoint. The number of married females between 15 and 45 years of age is a most significant factor in the fertility of a population; if the proportion of females in this group is small, the expected proportion of births will also be small. In 1956, 64.3 p.c. of all married females were in the age group 15-44 years, as compared with 64.0 p.c. in 1951, 61.2 p.c. in 1941, and 63.5 p.c. in 1931. This trend indicates a movement towards conditions more favourable to a higher birth rate than those which existed during the period of world-wide depression.

The high birth rate of the period 1951-56, which has had such a considerable effect on the increase in the total population and on its age composition, has also been an influence on the increase of 15.7 p.c. in the single population. Most of this gain was in the population under 15 years of age. During the same period, the married population increased by 14.1 p.c., widowed by 10.5 p.c., and divorced by 14.9 p.c. Other striking statistics of marital status are the excess of married males over married females (largely owing to a preponderance of male immigrants whose wives had not yet joined them), the great preponderance of widows as compared to widowers and the large and increasing number of divorced persons.

14.—Marital Status of the Population by Age Group and Sex, Census 1956

Age Group and Sex	Single					Married	Widowed	Divorced	Total
	No.	No.	No.	No.	No.				
Under 15 Years.....M.	2,663,819	—	—	—	—	2,663,819	—	—	2,663,819
F.	2,561,391	—	—	—	—	2,561,391	—	—	2,561,391
T.	5,225,210	—	—	—	—	5,225,210	—	—	5,225,210
15 - 19 ".....M.	580,203	6,382	39	11	586,635	580,203	6,382	39	586,635
F.	527,136	48,384	99	47	575,666	527,136	48,384	99	575,666
T.	1,107,339	54,766	138	58	1,162,301	1,107,339	54,766	138	1,162,301
20 - 24 ".....M.	409,245	157,574	186	174	567,179	409,245	157,574	186	567,179
F.	248,766	311,640	858	667	561,931	248,766	311,640	858	561,931
T.	658,011	469,214	1,044	841	1,129,110	658,011	469,214	1,044	1,129,110
25 - 34 ".....M.	318,489	885,563	2,092	2,227	1,208,371	318,489	885,563	2,092	1,208,371
F.	179,181	1,013,756	8,119	4,995	1,206,051	179,181	1,013,756	8,119	1,206,051
T.	497,670	1,899,319	10,211	7,222	2,414,422	497,670	1,899,319	10,211	2,414,422
35 - 44 ".....M.	140,684	926,988	6,751	3,955	1,078,378	140,684	926,988	6,751	1,078,378
F.	110,532	914,906	28,368	7,600	1,061,406	110,532	914,906	28,368	1,061,406
T.	251,216	1,841,894	35,119	11,555	2,139,784	251,216	1,841,894	35,119	2,139,784
45 - 54 ".....M.	102,230	714,831	16,533	4,068	837,662	102,230	714,831	16,533	837,662
F.	84,348	622,030	62,389	5,436	774,203	84,348	622,030	62,389	774,203
T.	186,578	1,336,861	78,922	9,504	1,611,865	186,578	1,336,861	78,922	1,611,865
55 - 64 ".....M.	70,075	480,954	33,951	2,645	587,625	70,075	480,954	33,951	587,625
F.	57,006	392,000	115,309	2,221	566,536	57,006	392,000	115,309	566,536
T.	127,081	872,954	149,260	4,866	1,154,161	127,081	872,954	149,260	1,154,161
65 - 69 ".....M.	27,491	180,721	28,427	912	237,551	27,491	180,721	28,427	237,551
F.	21,638	126,693	77,765	466	226,562	21,638	126,693	77,765	226,562
T.	49,129	307,414	106,192	1,378	464,113	49,129	307,414	106,192	464,113
70 years or over.....M.	43,344	233,628	106,743	944	384,659	43,344	233,628	106,743	384,659
F.	40,561	130,623	223,582	400	395,166	40,561	130,623	223,582	395,166
T.	83,905	364,251	330,325	1,344	779,825	83,905	364,251	330,325	779,825
All Ages.....M.	4,355,580	3,586,641	194,722	14,936	8,151,879	4,355,580	3,586,641	194,722	8,151,879
F.	3,830,559	3,560,032	516,489	21,832	7,928,912	3,830,559	3,560,032	516,489	7,928,912
T.	8,186,139	7,146,673	711,211	36,768	16,080,791	8,186,139	7,146,673	711,211	16,080,791

Section 11.—Origins

A population composed of diverse racial stocks gives rise to political, economic and social problems quite different in nature from those of one with a small admixture of foreign elements although, to the extent that certain racial stocks are more readily assimilated than others, the problems are mitigated. It is equally true that the different educational, moral, economic, religious and political backgrounds of a people of mixed origins lend variety and diversity to the national life.

The two basic stocks of the Canadian people are the French and the English: historically the French is much the older and, excepting at the time of the 1921 Census, has always exceeded in numbers any one of the basic British stocks.

For purposes of the census a person's origin or cultural group is traced through his father. For example if a person's father is German and his mother Norwegian the origin is entered as "German". Wherever possible the origin of a person is established by asking the language spoken by the person or by his paternal ancestor when he first came to Canada.

Census of 1951 data are the latest available on origins of the population.

15.—Origins of the Population, Census Years 1931, 1941 and 1951

NOTE.—Figures for census years 1871-1921 are given in the 1948-49 Year Book, p. 154.

Origin	1931	1941	1951	Origin	1931	1941	1951
No.	No.	No.	No.	No.	No.	No.	No.
British	5,381,071	5,715,904	6,709,685	Other European—			
English.....	2,741,419	2,968,402	3,630,344	concluded			
Irish.....	1,230,808	1,267,702	1,439,635	Norwegian.....	93,243	100,718	119,266
Scottish.....	1,346,350	1,403,974	1,547,470	Polish.....	145,503	167,485	219,845
Other.....	62,494	75,826	92,236	Romanian.....	29,056	24,689	23,601
				Russian.....	88,148	83,708	91,279
				Swedish.....	81,306	85,396	97,780
				Ukrainian.....	225,113	305,929	395,043
				Yugoslavic.....	16,174	21,214	21,404
				Other.....	9,392	9,787	35,616
Other European ...	4,753,242	5,526,964	6,872,889	Asiatic	84,548	74,064	72,827
French.....	2,927,990	3,483,038	4,319,167	Chinese.....	46,519	34,627	32,528
Austrian.....	48,639	37,715	32,231	Japanese.....	23,342	23,149	21,663
Belgian.....	27,585	29,711	35,148	Other.....	14,687	16,288	18,636
Czech and							
Slovak.....	30,401	42,912	63,959	Other Origins	157,925	189,723	354,028
Danish.....	34,118	37,439	42,671	Native Indian and			
Finnish.....	43,885	41,683	43,745	Eskimo.....	128,890	125,521	165,607
German.....	473,544	464,682	619,995	Negro.....	19,456	22,174	18,020
Greek.....	9,444	11,692	13,966	Other and not			
Hungarian.....	40,582	54,598	60,460	stated.....	9,579	42,028 ¹	170,401
Icelandic.....	19,382	21,050	23,307				
Italian.....	98,173	112,625	152,245	Totals	10,376,786	11,506,655	14,609,429
Jewish.....	156,726	170,241	181,670				
Lithuanian.....	5,876	7,789	16,224				
Netherlands.....	148,962	212,863	264,267				

¹ Includes 35,416 half-breeds.

Section 12.—Religious Denominations

At each decennial census the numbers of persons attached to any religious denomination, as reported by the persons enumerated, have been recorded. The distribution of the principal denominations for the census years 1931, 1941 and 1951 is given in Table 16.

16.—Principal Religious Denominations of the Population, Census Years 1931, 1941 and 1951

NOTE.—More detailed figures for census years 1871-1921 are given in the 1948-49 Year Book, p. 155.

Religious Denomination	1931	1941	1951		Religious Denomination	1931	1941	1951	
	No.	No.	No.	p.c.		No.	No.	No.	p.c.
Adventist.....	16,058	18,485	21,398	0.2	Pentecostal.....	26,349	57,742	95,131	0.7
Baptist.....	443,944	484,465	519,585	3.7	Presbyterian....	872,428	830,597	781,747	5.6
Christian Science	18,499	20,261	20,795	0.1	Roman Catholic.	4,102,960	4,806,431	6,069,496	43.3
Church of Eng- land in Canada.	1,639,075	1,754,368	2,060,720	14.7	Salvation Army.	30,773	33,609	70,275	0.5
Evangelical Church.....	22,239	37,064	50,900	0.4	Ukrainian (Greek) Cath- olic.....	186,879 ²	185,948 ²	190,831	1.4
Greek Orthodox.	102,529	139,845	172,271	1.2	United Church of Canada.....	2,021,065	2,208,658	2,867,271	20.5
Jewish.....	155,766	168,585	204,836	1.5	Other.....	232,424	221,879	280,424	2.0
Lutheran.....	394,920	401,836	444,923	3.2					
Mennonite ¹	88,837	111,554	125,938	0.9					
Mormon.....	22,041	25,328	32,888	0.2	Totals.....	10,376,786	11,506,655	14,009,429	100.0

¹ Includes "Hutterite".² Includes "Other Greek Catholic".

Section 13.—Countries of Birth

The decennial census collects information on the country of birth of immigrant arrivals in Canada and province of birth of Canadian born. For persons born outside of Canada the country of birth as constituted at the date of the census is recorded. Table 17 gives the total population by countries of birth for the census years 1931, 1941 and 1951.

17.—Countries of Birth of the Population, Census Years 1931, 1941 and 1951

NOTE.—Figures for census years 1871-1921 are given in the 1948-49 Year Book, p. 158.

Country of Birth	1931	1941	1951	Country of Birth	1931	1941	1951
	No.	No.	No.		No.	No.	No.
Canada	8,069,261	9,487,898	11,949,518	Europe—concl.			
United Kingdom....	1,138,942 ¹	960,125 ¹	912,482	Union of Soviet Socialist Republics ² ..	133,869	124,402	188,292
Other Commonwealth.....	45,888	43,644	20,567	Scandinavian countries ³	90,042	72,473	64,522
Europe.....	714,462	653,705	801,618	Central European countries ⁴	317,350	309,360	305,192
Belgium.....	17,033	14,773	17,251	Other Europe.....	11,002	9,810	38,143
Finland.....	30,354	24,387	22,035	Asia.....	60,608	44,443	37,145
France.....	16,756	13,795	15,650	United States.....	344,574	312,473	282,010
Germany.....	39,163	28,479	42,693	Other countries.....	3,051	3,512	6,089
Greece.....	5,579	5,871	8,594				
Italy.....	42,578	40,432	57,789	Totals.....	10,376,786	11,506,655⁵	14,009,429
Netherlands.....	10,736	9,923	41,457				

¹Includes the 26 counties of Ireland in 1931 and 1941.

²Includes Lithuania and Ukraine.

³Includes Denmark, Iceland, Norway and Sweden.

⁴Includes Austria, Czechoslovakia, Hungary, Yugoslavia, Poland and Romania.

⁵Includes "birthplace not stated".

Section 14.—Languages and Mother Tongues

Official language is not to be confused with mother tongue. Mother tongue is the language a person first spoke in childhood and still understands; official language (a term used herein for census purposes) refers only to the English and French languages. The numbers of persons speaking one, both or neither of the official languages as at the date of the 1951 Census are given in Table 18, classified by province.

18.—Population Speaking One, Both or Neither of the Official Languages by Province, Census 1951

NOTE.—Infants are classed as speaking the language of the home.

Province or Territory	Population Speaking—			
	English Only	French Only	English and French	Neither English nor French
	No.	No.	No.	No.
Newfoundland.....	356,377	153	3,990	896
Prince Edward Island.....	88,743	914	8,745	27
Nova Scotia.....	595,257	7,462	39,524	341
New Brunswick.....	318,560	100,712	96,095	330
Quebec.....	462,813	2,534,242	1,038,130	20,496
Ontario.....	4,115,584	78,974	359,965	43,019
Manitoba.....	685,914	7,869	58,441	24,317
Saskatchewan.....	767,248	4,656	40,789	19,035
Alberta.....	868,696	5,922	40,785	24,098
British Columbia.....	1,112,937	727	39,433	12,113
Yukon Territory.....	8,337	10	519	230
Northwest Territories.....	6,929	171	1,031	7,873
Canada.....	9,387,395	2,741,812	1,727,447	152,775

Mother tongue spoken is dealt with in Table 19 which shows that 1,659,770 persons at June 1, 1951, had neither English nor French as mother tongue.

19.—Mother Tongues of the Population, Census 1951

NOTE.—Infants are classed as speaking the language of the home.

Mother Tongue	Number	Percent- age of Total	Mother Tongue	Number	Percent- age of Total
English.....	8,280,809	59.11	Lithuanian.....	12,307	0.09
French.....	4,068,850	29.04	Magyar.....	42,402	0.30
Chinese.....	28,289	0.20	Netherland.....	87,935	0.63
Danish.....	15,714	0.11	Norwegian.....	43,831	0.31
Estonian.....	8,784	0.06	Polish.....	129,238	0.92
Finnish.....	31,771	0.23	Romanian.....	10,105	0.07
Flemish.....	12,623	0.09	Russian.....	39,223	0.28
Gaelic.....	13,974	0.10	Serbo-Croatian.....	11,031	0.08
German.....	329,302	2.35	Slovak.....	45,516	0.32
Greek.....	8,036	0.06	Swedish.....	36,096	0.26
Icelandic.....	11,207	0.08	Syrian and Arabic.....	5,475	0.04
Indian and Eskimo.....	144,787	1.03	Ukrainian.....	352,323	2.51
Italian.....	92,244	0.66	Yiddish.....	103,593	0.74
Japanese.....	17,589	0.12	Other.....	19,356	0.14
Lettish.....	7,019	0.05			
			Totals.....	14,009,429	100.00

Section 15.—Dwellings, Households and Families*

Households and Families.—Only a summary of the principal statistics on households and families recorded at the Census of 1956 is given here—more detailed information may be found in 1956 Census Reports 1-13 to 1-20 inclusive.

The total number and the average size of households and families for the census years 1951 and 1956 are shown in Table 20 for provinces and cities of 30,000 population or over. Similar figures for census metropolitan areas appear in Table 21. These figures show a consistent trend towards larger families in 1956 as compared with 1951, although the average size of household remained relatively stable over the five-year period.

* Census definitions are briefly as follows: **DWELLINGS.**—A *Dwelling* is defined as a structurally separate set of living premises with private entrance from outside the building, or from a common hallway or stairway inside. A *Single Detached Dwelling*, commonly called a single house, is a house containing one dwelling unit and completely separated on all sides from any other building or structure. *Apartments* and *Flats* include dwelling units in apartment blocks, suites in duplexes or triplexes, suites in structurally converted houses, living quarters located in business premises, janitor's quarters in schools, etc. In determining the number of *Rooms* in a dwelling, only those used or suited for living purposes including rooms occupied by servants, lodgers, or members of lodging families are counted.

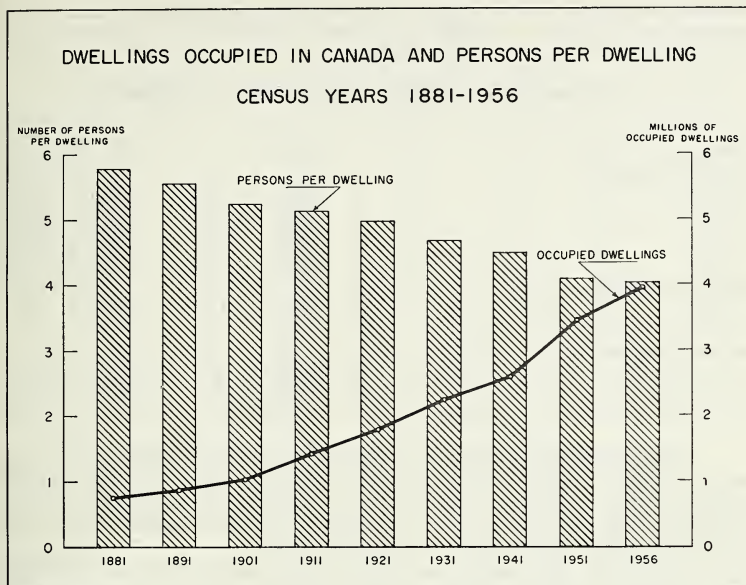
HOUSING.—A *Household* is a person or group of persons occupying one dwelling unit, the number of households thus equalling the number of occupied dwellings. Every person must be a member of some household, whether it consists of a family group with or without servants, lodgers, etc., a group of unrelated persons sharing a dwelling, or one person living alone. A dwelling is classed in need of *Major Repair* if it possesses any one of the following defects: sagging or rotting foundations indicated by cracked or leaning walls; faulty roof or chimney; unsafe outside steps or stairways; interior badly in need of repair. A *Crowded Dwelling* (or Household) is defined as one in which the number of persons exceeds the number of rooms occupied.

FAMILY.—A husband and wife (with or without children who have never married), or a parent with one or more children never married, living together in the same dwelling. Adopted children and step-children have the same status as natural children and, in fact, a family, for census purposes, may comprise a man or woman living with a guardianship child or ward under 21 years of age.

20.—Households and Families, and Persons per Household and Family, by Province and City of 30,000 Population or Over, Census Years 1951 and 1956

Province and City	Households		Families		Persons per Household		Persons per Family	
	1951 ¹	1956 ¹	1951	1956	1951 ¹	1956 ¹	1951	1956
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland.....	70,980	78,808	74,858	82,128	5.0	5.1	4.4	4.6
St. John's.....	10,572	11,219	11,427	12,163	4.8	4.9	4.0	4.1
Prince Edward Island....	22,454	22,682	21,381	21,153	4.3	4.2	4.0	4.1
Nova Scotia.....	149,555	162,854	145,127	154,243	4.2	4.1	3.9	3.9
Halifax.....	18,709	21,194	19,016	20,509	4.1	4.0	3.5	3.5
Sydney.....	6,324	6,914	7,080	7,092	4.8	4.5	3.9	4.0
New Brunswick.....	114,007	120,475	111,639	116,623	4.4	4.5	4.1	4.2
Moncton.....	6,595	8,647	6,424	8,286	4.0	4.0	3.5	3.7
Saint John.....	13,178	13,336	12,224	12,230	3.8	3.8	3.5	3.6
Quebec.....	858,784	1,001,264	856,041	970,414	4.6	4.4	4.2	4.2
Hull.....	9,324	11,167	9,916	11,240	4.6	4.3	4.0	4.0
Jacques-Cartier.....	4,779	6,927	4,908	7,011	4.7	4.8	4.3	4.5
Lachine.....	6,385	8,557	6,751	8,588	4.1	3.9	3.6	3.6
Montreal.....	247,482	285,501	246,389	267,934	4.0	3.7	3.5	3.5
Quebec.....	34,970	38,556	33,830	35,996	4.4	4.2	4.1	4.0
St. Laurent.....	4,976	9,304	5,039	9,148	3.9	4.0	3.6	3.8
Sherbrooke.....	11,543	13,646	11,034	12,595	4.1	4.1	3.9	4.1
Three Rivers.....	9,528	10,912	9,466	10,464	4.6	4.4	4.3	4.2
Verdun.....	19,806	21,009	20,123	20,293	3.8	3.6	3.4	3.4
Ontario.....	1,181,126	1,392,491	1,162,772	1,342,572	3.8	3.8	3.4	3.5
Brantford.....	10,373	14,642	9,774	13,494	3.5	3.5	3.2	3.4
Fort William.....	9,297	10,118	9,015	9,926	3.7	3.7	3.4	3.5
Guelph.....	7,104	9,284	7,084	8,597	3.8	3.5	3.3	3.4
Hamilton.....	55,337	63,815	55,764	62,329	3.7	3.7	3.2	3.3
Kingston.....	8,708	12,499	8,485	11,352	3.7	3.6	3.2	3.4
Kitchener.....	11,571	16,074	11,832	15,539	3.8	3.6	3.2	3.4
London.....	26,384	28,962	24,679	25,277	3.5	3.3	3.1	3.3
Oshawa.....	11,225	13,530	11,170	13,335	3.7	3.7	3.2	3.4
Ottawa.....	48,968	56,059	48,811	52,760	3.9	3.8	3.4	3.5
Peterborough.....	10,018	11,632	9,807	10,671	3.8	3.6	3.4	3.5
Port Arthur.....	8,426	9,979	8,082	9,442	3.6	3.6	3.4	3.5
St. Catharines.....	10,383	10,971	10,051	10,257	3.6	3.5	3.3	3.3
Sarnia.....	9,380	11,917	8,953	10,980	3.7	3.6	3.4	3.6
Sault Ste. Marie.....	7,856	9,169	8,124	9,127	4.1	3.9	3.5	3.6
Sudbury.....	9,452	11,526	9,978	11,092	4.4	3.9	3.7	3.6
Toronto.....	157,174	157,137	177,984	169,971	4.2	4.1	3.0	3.1
Windsor.....	31,813	33,280	30,855	30,786	3.7	3.6	3.4	3.4
Manitoba.....	202,398	217,964	191,268	204,414	3.7	3.7	3.6	3.6
Winnipeg.....	64,629	67,798	63,117	66,019	3.6	3.6	3.1	3.2
Saskatchewan.....	221,456	233,664	196,188	205,135	3.7	3.6	3.7	3.8
Regina.....	19,161	23,883	18,229	22,313	3.6	3.6	3.3	3.4
Saskatoon.....	14,982	20,315	13,639	18,065	3.4	3.4	3.3	3.4
Alberta.....	250,747	294,047	223,326	262,922	3.6	3.7	3.7	3.7
Calgary.....	37,711	52,785	34,053	46,176	3.3	3.3	3.2	3.3
Edmonton.....	42,922	57,748	40,278	55,525	3.6	3.7	3.3	3.5
British Columbia.....	337,777	392,403	299,845	346,003	3.3	3.4	3.3	3.4
New Westminster.....	7,984	8,874	7,278	7,711	3.3	3.2	3.2	3.3
Vancouver.....	101,330	108,953	92,798	94,467	3.3	3.2	3.0	3.1
Victoria.....	15,788	17,309	13,632	14,041	3.1	3.0	3.0	3.0
Yukon and Northwest Territories.....	..	6,994	4,939	5,893	..	3.8	3.9	4.1
Canada.....	3,409,284²	3,923,646	3,287,384	3,711,500	4.0²	3.9	3.7	3.8

¹ Exclusive of institutions, hotels, camps, etc.² Exclusive of the Yukon and Northwest Territories.



21.—Households and Families, and Persons per Household and Family, by Census Metropolitan Area, Census Years 1951 and 1956

Metropolitan Area	Households		Families		Persons per Household		Persons per Family	
	1951	1956	1951	1956	1951	1956	1951	1956
	No.	No.	No.	No.	No.	No.	No.	No.
Calgary.....	40,235	57,375	36,429	50,600	3.3	3.4	3.2	3.4
Edmonton.....	46,395	63,581	43,548	61,305	3.6	3.8	3.4	3.5
Halifax.....	29,640	37,171	30,327	36,799	4.2	4.1	3.6	3.7
Hamilton.....	68,640	86,990	68,820	84,941	3.7	3.7	3.2	3.4
London.....	32,835	42,354	31,117	38,394	3.5	3.4	3.2	3.4
Montreal.....	334,705	407,966	334,967	387,785	4.0	3.8	3.6	3.6
Ottawa.....	66,265	83,859	67,017	80,713	4.1	4.0	3.6	3.7
Quebec.....	54,930	64,825	54,076	62,176	4.6	4.4	4.3	4.2
Saint John.....	19,735	21,169	18,414	19,628	3.8	3.8	3.6	3.7
St. John's.....	12,995	14,788	13,964	15,876	4.9	5.0	4.2	4.3
Toronto.....	273,200	341,076	302,381	360,904	4.0	3.9	3.1	3.2
Vancouver.....	153,975	192,004	141,939	171,296	3.3	3.3	3.1	3.3
Victoria.....	31,620	38,411	27,988	32,949	3.1	3.1	3.0	3.2
Windsor.....	41,595	49,882	40,729	47,166	3.7	3.7	3.4	3.5
Winnipeg.....	95,955	107,841	94,321	105,211	3.6	3.7	3.2	3.3

In Table 22 households are classified according to the number of persons, the number of family groups, and the number of lodgers they contain. This information is shown for Canada as a whole with comparable figures from the 1951 and 1956 Censuses. It will be seen that the two-person household was the most common household size in both years, and in 1956 two-person households represented nearly 22 p.c. of all households. The percentage of multiple-family households and households with lodgers showed a

decrease between 1951 and 1956. This is consistent with the fact previously stated that, although families showed a noticeable increase in size between 1951 and 1956, there was no corresponding increase in size of household.

22.—Household Composition, Census Years 1951 and 1956

Item	1951		1956	
	No.	p.c.	No.	p.c.
Persons in Households—				
1.....	252,435	7.4	308,613	7.9
2.....	711,110	20.9	859,109	21.9
3.....	688,025	20.2	739,390	18.8
4.....	645,515	18.9	742,363	18.9
5.....	439,875	12.9	513,821	13.1
6-9.....	581,675	17.1	664,366	16.9
10+.....	90,660	2.7	95,984	2.4
Families in Households—				
0.....	385,010	11.3	459,420	11.7
1.....	2,794,860	82.0	3,259,499	83.1
2+.....	229,425	6.7	204,727	5.2
Lodgers in Households—				
0.....	3,081,085	90.4	3,610,238	92.0
1.....	171,310	5.0	162,067	4.1
2.....	73,480	2.2	68,950	1.8
3+.....	83,420	2.4	82,391	2.1

In Table 23 families are classified according to whether or not they maintained their own households. Those not maintaining their own households fall into two main sub-categories—families related to the head of the household, and non-related lodging families. In addition, there are a few who do not fit either of these sub-categories, chiefly families of employees who live in their employer's household.

The percentage of families maintaining their own households rose from 90.2 in 1951 to 92.3 in 1956. This is again consistent with the earlier statement of a smaller percentage of multiple-family households in 1956 than in 1951. All of these indicators point to an improvement in living conditions over the five-year period.

23.—Percentage of Families in each Type of Household by Province, Census 1956

Province or Territory	Maintaining Own Household	Not Maintaining Own Household			All Families
		Related	Lodging	Total ¹	No.
	p.c.	p.c.	p.c.	p.c.	No.
Newfoundland.....	88.9	9.4	1.4	11.1	82,128
Prince Edward Island.....	91.6	6.9	1.1	8.4	21,153
Nova Scotia.....	91.2	6.7	1.6	8.8	154,243
New Brunswick.....	91.7	6.8	1.2	8.3	116,623
Quebec.....	93.4	4.9	1.5	6.6	970,414
Ontario.....	90.3	5.0	4.4	9.7	1,342,572
Manitoba.....	92.6	3.7	3.3	7.4	204,414
Saskatchewan.....	95.9	2.6	1.1	4.1	205,135
Alberta.....	94.7	2.9	1.7	5.3	262,922
British Columbia.....	94.6	3.1	2.0	5.4	346,003
Yukon and Northwest Territories.....	95.3	3.0	0.8	4.7	5,893
Canada.....	92.3	4.7	2.7	7.7	3,711,500

¹ Includes other types of families not maintaining own household.

Table 24 shows the number of children in families in 1956. This is limited to children never married under 25 years of age and living with their parents or guardians at the time of the 1956 Census. The number of children is classified to show the percentage of children in each of four separate age groups which correspond roughly with the pre-school children, those of elementary school age, those at the secondary school level, and those of college or working age.

24.—Percentage of Children at Home, 24 Years of Age or Under, by Age Group and Province, Census 1956

Province or Territory	Under 6 Years	6-13 Years	14-17 Years	18-24 Years	Total Children
	p.c.	p.c.	p.c.	p.c.	No.
Newfoundland.....	35.7	40.0	13.4	11.0	210,360
Prince Edward Island.....	33.2	41.1	15.0	10.7	43,519
Nova Scotia.....	34.4	40.4	14.9	10.4	293,299
New Brunswick.....	34.2	40.6	14.5	10.6	257,311
Quebec.....	33.7	38.5	14.0	13.8	2,094,499
Ontario.....	36.7	39.1	13.5	10.7	2,009,876
Manitoba.....	35.7	39.6	14.2	10.5	330,682
Saskatchewan.....	35.9	39.3	14.9	10.0	358,534
Alberta.....	38.2	38.8	13.7	9.3	455,735
British Columbia.....	37.0	39.7	13.8	9.5	495,918
Yukon and Northwest Territories.....	42.4	37.9	11.6	8.0	12,665
Canada.....	35.5	39.1	13.9	11.4	6,562,398

In Table 25 families are classified by age of family head and in Table 26 they are classified into two groups: those consisting of a husband and wife with or without children, and those consisting of one parent only. The latter are classified further according to the marital status and sex of the family head. Widowed heads form the bulk of this group.

25.—Families classified by Age of Head and by Province, Census 1956

Province or Territory	Under 35 Years	35-44 Years	45-54 Years	55-64 Years	65 Years or Over	Total Families
	No.	No.	No.	No.	No.	No.
Newfoundland.....	22,793	21,392	15,509	11,339	11,095	82,128
Prince Edward Island.....	4,605	4,922	4,184	3,449	3,993	21,153
Nova Scotia.....	41,002	39,228	29,826	21,095	23,092	154,243
New Brunswick.....	30,443	29,572	22,688	16,577	17,343	116,623
Quebec.....	281,959	252,649	198,174	131,346	106,286	970,414
Ontario.....	388,056	337,242	266,471	186,401	164,402	1,342,572
Manitoba.....	52,447	50,718	40,388	29,601	31,260	204,414
Saskatchewan.....	50,583	49,867	40,744	30,262	33,679	205,135
Alberta.....	77,506	66,753	51,683	34,193	32,787	262,922
British Columbia.....	89,467	87,870	69,057	44,868	54,741	346,003
Yukon and Northwest Territories...	2,376	1,599	1,052	527	339	5,893
Canada.....	1,041,237	941,812	739,776	509,658	479,017	3,711,500

26.—Families classified by Marital Status and Sex of Family Head, by Province, Census 1956

Province or Territory	Families with Husband and Wife at Home	Families with Only One Parent at Home								Total Families
		Widowed Head		Married Head		Divorced Head		Total ¹		
		Male	Female	Male	Female	Male	Female	Male	Female	
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland.....	74,037	1,860	4,438	540	1,018	6	22	2,477	5,614	82,128
Prince Edward Island.....	18,628	443	1,277	136	577	2	22	598	1,927	21,153
Nova Scotia.....	136,152	2,580	9,077	1,406	4,083	112	360	4,238	13,853	154,243
New Brunswick.....	104,968	1,822	5,980	902	2,380	75	291	2,860	8,795	116,623
Quebec.....	884,802	15,837	50,541	6,872	10,538	162	833	23,107	62,505	970,414
Ontario.....	1,234,229	13,772	56,810	8,508	23,155	831	4,061	23,364	84,979	1,342,572
Manitoba.....	186,693	2,503	9,401	1,105	3,549	133	687	3,792	13,929	204,414
Saskatchewan.....	188,257	2,565	8,827	1,260	3,198	110	424	4,001	12,877	205,135
Alberta.....	242,319	2,627	10,084	1,682	4,464	267	1,088	4,630	15,973	262,922
British Columbia.....	317,788	2,950	13,170	2,081	6,622	517	2,327	5,629	22,586	346,003
Yukon and North- west Territories.....	5,188	142	218	122	145	4	7	279	426	5,893
Canada.....	3,393,061	47,101	169,823	24,614	59,729	2,219	10,122	74,975	243,464	3,711,500

¹ Includes a few families with heads never married.

Housing Characteristics.—A census of housing was not taken in 1956 so that the latest census information on housing characteristics is for the year 1951.

Table 27 shows that the increase in the number of dwellings during the 1941-51 decade was 11 p.c. higher than the increase in population, thus reducing the number of persons per dwelling from 4.3 to 4.0. Definition changes between 1941 and 1951 are partly responsible for the relatively larger increase in dwellings particularly of the apartment and flat type. Since owned dwellings increased by 49.1 p.c. and rented dwellings by only 4.2 p.c., it would appear that many people who were tenants in 1941 have since bought homes and that most new homes were built for owners rather than for tenant occupancy.

The 1941 Census of Housing was based on a 10 p.c. sample of dwellings situated within the nine provinces. For the 1951 Census the size of the sample was increased to 20 p.c. and the coverage included Newfoundland but, as in 1941, did not extend to the Yukon and Northwest Territories. For comparative purposes Newfoundland is omitted from the 1951 figures in Table 27. The number of occupied dwellings in Newfoundland in 1951 totalled 70,980 as against a 1945 figure of 62,293.

27.—Housing Characteristics, Census Years 1941 and 1951

(Excludes Newfoundland and the Territories)

Characteristics	1941		1951		Increase 1941-51	
	No.	P.C. of Total	No.	P.C. of Total	No.	P.C.
Occupied Dwellings¹.....	2,575,744	100.0	3,338,315	100.0	762,571	29.6
Single detached.....	1,853,454	72.0	2,216,275	66.4	362,821	19.6
Apartments and flats.....	533,034	20.7	881,245	26.4	348,211	65.3
Single attached.....	189,256	7.3	240,795 ²	7.2	51,539	27.2
Owned.....	1,459,357	56.7	2,175,415	65.2	716,058	49.1
Rented.....	1,116,387	43.3	1,162,900	34.8	46,513	4.2
Rooms per dwelling.....	5.5	...	5.3	...	...	...
Persons per dwelling.....	4.3	...	4.0	...	...	...
In need of major repair.....	695,736	27.0	450,625	13.5	-245,111	-35.2
Crowded dwellings ³	148,418	18.4	175,995	16.0	27,577	18.6
Dwellings with—						
Electric lighting.....	1,780,667	69.1	2,929,450	87.8	1,148,783	64.5
Furnace heating.....	997,588	38.7	1,632,275	48.9	634,687	63.6
Running water.....	1,558,586	60.5	2,503,080	75.0	944,494	60.6
Flush toilet ⁴	1,342,198	52.1	2,170,815	65.0	828,617	61.7
Bath or shower ⁴	1,169,760	45.4	1,926,455	57.7	756,695	64.7
Electric or gas range.....	1,019,421	39.6	1,696,130	50.8	676,709	66.4
Electric or gas refrigeration.....	538,535	20.9	1,589,625	47.6	1,051,090	195.2
Electric vacuum cleaner.....	624,178	24.2	1,409,090	42.2	784,912	125.8
Telephone.....	1,037,298	40.3	2,013,640	60.3	976,342	94.1
Radio.....	2,002,889	77.8	3,086,695	92.5	1,083,806	54.1
Passenger automobile.....	944,591	36.7	1,435,925	43.0	491,334	52.0
Owner-occupied non-farm dwellings report- ing a mortgage.....	275,623	31.2	515,035	30.9	239,412	86.9
Monthly Rent of Tenant-Occupied Non- farm Dwellings—						
Under \$30 ⁵	738,294	75.1	501,540	45.5	-236,754	-32.1
\$30-\$59.....	221,189	22.5	437,815	39.8	216,626	97.9
\$60 or over.....	24,034	2.4	162,265	14.7	138,231	575.1

¹ Exclusive of hotels, institutions, camps, etc.

² Includes auto-trailers, houseboats, tents and other miscellaneous types.

³ For cities of 30,000 or over only.

⁴ For exclusive use of household.

⁵ Includes 'rent-free' dwellings.

The statistics of Table 27 reflect the higher level of prosperity at the latter decade in both urban and rural areas. In 1951 a higher percentage of homes had indoor plumbing, electricity and furnace heating, and had such conveniences as mechanical refrigerators,

electric vacuum cleaners, telephones, radios and passenger automobiles. There was a sharp drop in the number of homes needing major repair. Washing machines are not shown in Table 27 because there are no comparable 1941 figures but in 1951, 72.5 p.c. of the dwellings possessed a powered washing machine. Though much of this advance may be attributed to general prosperity, part of the trend is accounted for by the increasing urbanization of the Canadian population and the availability of modern conveniences to rural areas.

Annually since 1953 a sample survey on household facilities and equipment has been conducted in conjunction with the monthly labour force survey. Over 30,000 households chosen by random sampling methods in about 115 different areas are interviewed. Results of the 1956 survey are presented in Table 28.

28.—Housing Characteristics, Sample Survey, September 1956

Characteristics	No.	P.C. of Total	Characteristics	No.	P.C. of Total
Occupied Dwellings ¹	3,974,000	100.0	Dwellings with—concl.		
Single detached.....	2,697,000	67.9	Furnace heating.....	2,266,000	57.0
Apartments, flats.....	951,000	23.9	Running water.....	3,249,000	81.8
Single attached.....	326,000	8.2	Flush toilet ²	2,906,000	73.1
Owned.....	2,685,000	67.6	Bath or shower ²	2,656,000	66.8
Rented.....	1,289,000	32.4	Electric or gas range.....	2,619,000	65.9
Rooms per dwelling.....	5.3	...	Electric or gas refrigeration.....	3,186,000	80.2
Persons per dwelling.....	4.0	...	Electric vacuum cleaner.....	2,199,000	55.3
Dwellings with—			Telephone.....	2,930,000	73.7
Electric lighting.....	3,739,000	94.1	Radio.....	3,817,000	96.0
			Passenger automobile.....	2,321,000	58.4

¹ Excludes households in the Yukon and Northwest Territories; households of Indians on reserves; such collective type households as those living in hotels, large lodging houses, institutions, clubs and camps. ² For exclusive use of household.

Section 16.—The Blind and Deaf Population

The latest information on totally blind or deaf persons was recorded at the Census of 1951. Persons blind in one eye were not recorded as blind nor were partially deaf persons such as those able to hear with the help of a mechanical aid included as deaf. Table 29 shows the number and proportion of totally blind and/or deaf persons per 10,000 population in each province and territory. More detailed information on this subject is contained in Vol. II of the 1951 Census.

29.—Number of Blind and Deaf Persons and Proportion per 10,000 Population by Province, 1951

Province or Territory	Number			Number per 10,000 Population		
	Blind	Deaf	Blind and Deaf	Blind	Deaf	Blind and Deaf
Newfoundland.....	513	497	27	14.2	13.8	0.7
Prince Edward Island.....	104	88	4	10.6	8.9	0.4
Nova Scotia.....	943	747	43	14.7	11.6	0.7
New Brunswick.....	744	554	33	14.4	10.7	0.6
Quebec.....	3,734	5,139	199	9.2	12.7	0.5
Ontario.....	4,173	3,897	200	9.1	8.5	0.4
Manitoba.....	712	596	32	9.2	7.7	0.4
Saskatchewan.....	590	628	29	7.1	7.6	0.3
Alberta.....	613	556	21	6.5	5.9	0.2
British Columbia.....	972	907	68	8.3	7.8	0.6
Yukon Territory.....	8	4	—	8.8	4.4	—
Northwest Territories.....	18	3	—	11.2	1.9	—
Canada.....	13,124	13,616	656	9.4	9.7	0.5

Section 17.—The Indians and Eskimos of Canada

The Indians.*—There are more than 155,000 native Indians in Canada today and it is noteworthy that their rate of increase is higher than that of any other segment of the population. They live on more than 2,200 tracts of land which have been reserved for their use and benefit. These reserves are located in every province with the exception of Newfoundland where the provincial government has a responsibility for Indians on the Island and the Coast of Labrador. Elsewhere in Canada, the Indian Affairs Branch of the Federal Department of Citizenship and Immigration is responsible for the administration of the Indian Act and matters affecting the welfare of Indians.

30.—Indian Land in Reserves and Number of Bands by Province, Year Ended Mar. 31, 1957

Province or Territory	Reserves		Bands	Province or Territory	Reserves		Bands
	No.	Area			No.	Area	
		acres	No.			acres	No.
Prince Edward Island....	4	2,741	1	Saskatchewan.....	120	1,204,489	67
Nova Scotia.....	40	19,492	2	Alberta.....	90	1,535,061	44
New Brunswick.....	23	37,671	16	British Columbia.....	1,627	820,489	204
Quebec.....	23	178,571	42	Northwest Territories...	10	1,924	14
Ontario.....	166	1,560,489	118	Yukon Territory.....	15	3,535	18
Manitoba.....	107	524,490	51	Canada.....	2,225	5,888,955¹	577

¹ Not exact addition of individual items because of rounding of figures.

Administration.—The primary function of the Indian Affairs Branch, under the Indian Act, is to administer the affairs of Canadian Indians in a manner which will enable them to become increasingly self-supporting and independent members of the community. Among the important matters that come within the purview of Canadian Indian administration are: the management of Indian reserves and surrendered lands; tribal or band funds; education; welfare projects; relief; family allowances; rehabilitation of Indian veterans on reserves; descent of property; Indian treaty obligations; and enfranchisement of Indians.

The present Indian Act, proclaimed Sept. 4, 1951, was drawn up after a lengthy inquiry of a Special Committee of the Senate and the House of Commons, and after taking into account the views of the Indians themselves expressed at a conference held for that purpose. The overriding consideration which shaped the present Act was the desire to promote the integration of Indians into Canadian social and economic life.

As a means of achieving this, the Act makes provision for the election of Band councils whose authority extends over a number of areas of immediate concern to Indians resident on the reserve, including such matters as health, regulation of traffic, control of livestock, and management of fish, game and fur. Bands that have achieved an advanced stage of development may enact by-laws having to do with the raising, appropriation and expenditure of money.

While most Band councils are elected for a two-year term as provided in the Indian Act, some continue to adhere to appointment by tribal custom. All Bands however are given the opportunity to decide whether they wish to take advantage of the elective provisions of the Indian Act or to to adhere to tribal custom.

The Indian Affairs Branch takes a census of the Indian population under its jurisdiction at five-year intervals. The figures for the 1954 Census are given in Tables 31 and 32.

* Prepared in the Indian Affairs Branch, Department of Citizenship and Immigration, Ottawa.

31.—Indian Population classified by Age Group and Sex, by Province, Departmental Census 1954

Province or Territory	Under 7 Years		7 Years and Under 16		16 Years and Under 21		21 Years and Under 65		65 Years or Over		Totals	
	Male	Fe-male	Male	Fe-male	Male	Fe-male	Male	Fe-male	Male	Fe-male	Male	Fe-male
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
P. E. Island.....	21	19	30	31	13	16	67	58	10	7	141	131
Nova Scotia.....	310	308	326	311	181	185	642	608	74	57	1,533	1,469
New Brunswick....	305	294	284	285	141	136	591	486	55	52	1,376	1,253
Quebec.....	1,784	1,743	1,833	1,853	931	967	4,014	3,478	499	472	9,061	8,513
Ontario.....	3,487	3,499	3,833	4,040	2,193	2,055	8,271	7,560	1,250	1,067	19,034	18,221
Manitoba.....	2,377	2,397	2,282	2,303	972	930	4,061	3,440	465	457	10,157	9,527
Saskatchewan.....	2,180	2,142	2,204	2,221	912	962	3,799	3,536	412	382	9,507	9,243
Alberta.....	1,912	1,996	1,809	1,864	794	788	3,090	2,805	346	311	7,951	7,764
British Columbia....	3,614	3,587	3,534	3,642	1,488	1,494	6,581	5,652	780	714	15,997	15,089
Yukon Territory....	144	170	176	190	81	78	327	310	49	43	777	791
N.W.T.....	442	400	420	404	179	175	932	835	119	117	2,092	1,931
Totals.....	16,576	16,555	16,731	17,144	7,885	7,786	32,375	28,763	4,059	3,679	77,626	73,932

32.—Religious Denominations of the Indian Population, Departmental Census 1954

Province or Territory	Anglican	Baptist	United Church	Presbyterian	Roman Catholic	Other Christian Beliefs	Aboriginal Beliefs	Totals
	No.	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island.....	—	—	—	—	272	—	—	272
Nova Scotia.....	—	—	—	—	3,002	—	—	3,002
New Brunswick.....	—	—	—	—	2,629	—	—	2,629
Quebec.....	3,383	—	425	—	13,482	141	143	17,574
Ontario.....	11,313	1,960	7,038	622	12,917	1,232	2,173	37,255
Manitoba.....	5,855	2	5,090	846	7,250	564	77	19,684
Saskatchewan.....	5,532	37	1,604	251	10,150	81	1,095	18,750
Alberta.....	2,037	143	1,917	—	11,225	127	266	15,715
British Columbia.....	6,025	—	6,310	—	17,959	792	—	31,086
Yukon Territory.....	1,165	84	1	—	314	—	4	1,568
Northwest Territories....	711	—	—	—	3,310	—	2	4,023
Totals.....	36,021	2,226	22,385	1,719	82,510	2,937	3,760	151,558

Education.—The proportion of Indians who have become satisfactorily adjusted to modern conditions is of course greater among those who have taken full advantage of the Federal Government's educational program. Residential schools are available to Indian children from broken homes, orphans or those who, because of isolation or the nomadic way of life of their parents, would otherwise be unable to attend school. For children who can live at home the Federal Government operates day schools in Indian communities. Alternatively, where conditions are favourable, arrangements are made with local educational authorities for Indian children to attend non-Indian schools. An increasing number of Indian children in the elementary grades have been admitted to schools where other children are enrolled and the majority of Indian children attending secondary school and college classes are educated in association with non-Indians. The Federal Government pays the charges for school fees and books, necessary transportation and, for some students who must live away from home, part or all of the cost of room and board.

Similar assistance is given to Indian young people to encourage them to obtain vocational and professional training. Of those who have qualified as school teachers, 81 are now serving in Indian residential and day schools. Indians have qualified in medicine, dentistry, nursing, agriculture and other professions. Preference in appointment to positions in the Indian service is given to qualified Indians.

In the year ended Mar. 31, 1956, there were 476 Indian schools in operation comprising 66 residential schools, 368 regular day schools, 31 seasonal schools and 11 hospital schools. The enrolment in residential schools was 10,599 and in all other Indian schools 20,434. Enrolment by province was: Prince Edward Island, 38; Nova Scotia, 624; New Brunswick, 476; Quebec, 2,388; Ontario, 7,490; Manitoba, 4,581; Saskatchewan, 4,277; Alberta, 4,664; British Columbia, 6,188; and Yukon Territory, 307.

33.—Enrolment and Average Attendance at Indian Schools, Years Ended Mar. 31, 1947-56

Year Ended Mar. 31—	Residential Schools		Day Schools		All Schools		
	Enrolment	Average Attendance	Enrolment	Average Attendance	Enrolment	Attendance	
						No.	P.C. of Enrolment
	No.	No.	No.	No.	No.		
1947.....	9,304	8,192	10,318	7,449	19,622	15,641	79.7
1948.....	8,986	7,863	11,115	8,296	20,101	16,159	80.3
1949.....	9,368	8,345	12,615	10,414	21,983	18,759	85.3
1950.....	9,316	8,593	14,093	12,060	23,409	20,653	88.2
1951.....	9,357	8,779	15,514	13,526	24,871	22,305	89.7
1952.....	9,844	9,175	15,746	13,673	25,590	22,848	89.3
1953.....	10,112	9,309	15,837	13,826	25,949	23,135	89.2
1954.....	11,090	9,516	17,084	14,541	28,174	24,057	85.4
1955.....	10,501	9,878	17,947	16,254	28,448	26,132	91.9
1956.....	10,599	10,113	20,434	17,697	31,033	27,810	89.6

In addition to pupils in Indian schools there were 4,644 Indian children enrolled in elementary grades in provincial and private schools and 1,555 in secondary schools and in higher education courses, making a total enrolment of Indians in educational classes of 37,305. In the year ended Mar. 31, 1956, there were 2,210 Indians receiving secondary and higher education.

Welfare.—During 1956, 21,572 Indian families received \$4,098,643 in family allowances on behalf of 68,210 children. These payments contributed substantially to a better balanced diet and better clothing for Indian children. Approximately \$3,000,000 is paid annually to Indians in the form of blind persons' allowances, disabled persons' allowances, old age assistance and old age security payments. When necessary the Government provides direct relief assistance to Indians in the form of food, fuel, clothing and household equipment. The Indian Affairs Branch also makes arrangements for private foster-home and institutional placement of children, juvenile delinquents, cripples and unemployable and aged adults. Assistance is also provided for unmarried mothers and for the rehabilitation of disabled Indians. Increasing emphasis is being placed on the importance of the suitable placement of children requiring protection and upon the importance of preventive work in the field of juvenile delinquency.

The provision of special foods as a preventive measure against tuberculosis was continued. Apart from the humanitarian aspect, the policy has as its aim a reduction in the number of new cases.

Improvement in housing conditions has been achieved recently through the efforts of the Indians themselves as a result of expenditures from government appropriations, from Indian Band funds, and through Veterans' Land Act benefits. Costs of house repairs during the year ended Mar. 31, 1957, amounted to \$397,554 and the total expenditure on new houses built on the various reserves was \$2,007,330. Of these amounts the Indians, through Band funds, Veterans' Land Act grants and personal contributions, provided over 54 p.c. of the cost of repairs and 49 p.c. of the expenditure on new housing. Revolving Fund loans are available for the purchase of farm machinery, gas and oil, fencing materials, seed grain, livestock and similar essentials, and also for payment of wages or reserve employment projects. The total in the Revolving Fund was increased early in 1957 from \$350,000 to \$1,000,000 to meet the increased demand for loans.

Fur Conservation.—During the year 1956 the fur conservation program undertaken in co-operation with the various provinces was continued. Approximately 179,930 beaver pelts valued at \$2,049,382 were taken in Manitoba, Saskatchewan and Ontario. In addition about 3,674,561 muskrats valued at approximately \$3,474,886 were trapped in Ontario, Manitoba and Saskatchewan. Benefits accruing to Indians in the three provinces from the trapping of these fur bearers amounted to about \$3,314,560. In Quebec, nine fur preserves with a total area of approximately 150,000 sq. miles are set aside exclusively for Indian trapping under joint management by the Indian Affairs Branch and the Quebec Department of Fish and Game. The six areas in production during the 1956 season produced 21,500 beaver which brought nearly \$300,000 to the Indian trappers.

Eight full-time supervisors are employed across Canada to help the Indians derive the fullest possible benefits from hunting and trapping.

The Eskimos.*—The Eskimos are only a fragment of the total population of Canada numbering, according to the 1956 Census, approximately 11,000 persons. However, they are part of the human resources of the country and, as such, are entitled to the benefits of Canadian citizenship and to assistance in adapting themselves to changing conditions. They, together with the Indians, represent the original inhabitants of Canada and their ingenuity and resourcefulness are illustrated by their ability to maintain existence against a harsh unrelenting climate in a region where food, being almost entirely fish or animal, requires great skill to obtain and is most unpredictable in its availability. Greater penetration into the Arctic from the south, an unstable, precarious fur market, a decreasing game supply and an increasing population have combined to alter the long established patterns of Arctic life very rapidly. The translation of Canada's northernmost citizens from the Stone Age to the Hydrogen Age is accompanied by many problems.

The Northern Administration and Lands Branch of the Department of Northern Affairs and National Resources is responsible for the administration of Eskimo affairs. The Department of National Health and Welfare administers Eskimo health and medical services. Royal Canadian Mounted Police detachments throughout the north undertake field duties for both departments. In fact, the problems involved in looking after a sparse Eskimo population scattered over about 900,000 sq. miles of territory require the continuous co-operation of all northern inhabitants—teachers, missionaries, traders, doctors, nurses, administrators, radio operators and weather personnel. Administrative contact is maintained by radio and through the Central and Western Arctic and Eastern Arctic Patrols which carry representatives of the Administration and other government departments on an annual inspection tour. Officers of the Administration also make periodic visits by air.

Family allowances are paid to most Eskimos in kind from a list designed to supplement rather than supplant the normal native diet. Eskimos also enjoy the full benefits of old age security and assistance payments and of allowances for blind persons. Missions assisted by Federal Government grants operate hospitals at Aklavik, Chesterfield Inlet and Pangnirtung, and the Department of National Health and Welfare has nursing stations at Coppermine, Frobisher Bay, Lake Harbour, Cape Dorset, Hall Lake, Fort Chimo, Port Harrison and Great Whale River. Tuberculosis and other medical surveys are carried out from year to year and treatment where necessary is provided either at the hospitals within the territory or at larger institutions outside.

The Arctic Division of the Department of Northern Affairs and National Resources studies and deals with Eskimo problems. Many Eskimos have taken advantage of unprecedented opportunities for wage employment with mining companies, on the Mid-Canada and DEW radar lines, in transportation and communications, in government construction and with traders and missionaries. In many communities, the shift from the traditional trapping-hunting economy has been very sharp. While raising living standards, wage employment has added to the immediate problems of adjustment.

* Prepared in the Editorial and Information Division of [the Department of Northern Affairs and National Resources, Ottawa.

Much of the activity of the Arctic Division is based upon guiding the Eskimos through this difficult period. Field staff is growing constantly. Northern Service Officers are now posted at Frobisher Bay, Cape Dorset, Fort Chimo, Great Whale River, Churchill, Baker Lake, Tuktoyaktuk and Cambridge Bay. Some are assigned to the DEW Line where they provide guidance and assistance to Eskimos newly taking up wage employment; others are assigned to very remote areas where the full impact of an industrial society has yet to be felt. Social workers have been appointed to help solve some of the social problems arising out of a new economy. Welfare services for Eskimos in the Arctic and in southern hospitals are being expanded.

At Frobisher Bay on southern Baffin Island, a Rehabilitation Centre comprising thirteen buildings has been completed. The houses include kitchen-dining rooms, bath house-laundries and workshops. The remainder will be occupied by former Eskimo patients who, for various reasons, are no longer able to support themselves on the land. By developing special skills, they will once again become productive members of society.

Projects, mainly on an experimental basis, are being carried out in order to expand and diversify the Eskimo economy. Handicrafts not only provide revenue but also a means of cultural self-expression. Reindeer herding in the Mackenzie Delta, animal husbandry at Fort Chimo, eiderdown collecting on Baffin Island and Ungava Bay, sealskin tanning, boat-building, and the manufacture of arctic clothing are a few of the undertakings. Eskimos in overpopulated or depleted areas are being encouraged and assisted to move to areas where game is more plentiful or where employment is to be found. A fund has been established from which loans may be made to assist Eskimos to carry out approved projects for the betterment of their economy.

Since 1945, the Government has built fourteen schools primarily for Eskimo children. They are at centres spreading from the Mackenzie Delta to northern Quebec. Missions assisted by government grants also operate schools in many Eskimo settlements. Vocational training courses for young Eskimos have been started in the south to help develop their mechanical aptitudes and to provide new opportunities for employment.

Section 18.—Statistics of World Population

World population figures given in Table 34 are from the United Nations *Population and Vital Statistics Reports* for January 1957 and, except as otherwise noted, are official mid-year estimates for 1955. The area figures are from the United Nations *Statistical Yearbook, 1956*.

Estimated Population of the World by Continents.—The statement below, published by the United Nations, presents estimates of the 1955 mid-year population by continental divisions. These continental totals are not always the sum of the estimates for individual countries given in Table 34 because, where considered necessary, adjustments have been made in order to arrive at the most reasonable estimates under existing circumstances. The world total must be regarded only as an approximate estimate, the data for Africa and Asia being subject to considerable error.

	No.
Africa.....	223,000,000
North America.....	238,000,000
South America.....	124,000,000
Asia (exclusive U.S.S.R.).....	1,482,000,000
Europe (exclusive U.S.S.R.).....	410,000,000
Oceania.....	14,000,000
Union of Soviet Socialist Republics.....	200,000,000
WORLD TOTAL.....	2,691,000,000

34.—Areas and Populations of the Countries or Areas of the World 1955

Continent and Country	Area	Population	Continent and Country	Area	Population
	sq. miles	'000		sq. miles	'000
Africa			Africa—concl.		
Egypt.....	386,101 ¹	22,934	FORMER MANDATED TERRITORY (Union of South Africa)		
Ethiopia and Eritrea, Federa- tion of.....	457,267	20,000 ²	South West Africa ¹¹	318,099	458
Liberia.....	43,000	1,250			
Libya.....	679,360	1,105			
Morocco—			America, North		
Former French Zone.....	150,888	8,495 ³	Canada.....	3,851,113	16,589 ²
Former Spanish Zone ⁴	7,589	1,045	Costa Rica.....	19,653	951
Tangier.....	135	183	Cuba.....	44,218	5,829 ^{2,3}
Sudan.....	967,501	3,745	Dominican Republic.....	18,816	2,404
Tunisia.....	60,166	13,669	El Salvador.....	7,722	2,193
Union of South Africa ⁵	472,359		Guatemala.....	42,042	3,258
TERRITORIES AND DEPENDENCIES			Haiti.....	10,714	3,305
Belgium—			Honduras.....	43,277	1,660
Belgian Congo.....	904,994	12,600 ⁶	Mexico.....	760,375	29,679
France—			Nicaragua.....	57,143	1,245
Algeria.....	846,126	9,620	Panama.....	28,753	910
Comoro Islands.....	838	170 ⁶	United States of America.....	3,022,389	165,271 ³
French Equatorial Africa.....	969,114	4,680			
French Somaliland.....	8,494	63 ⁶	TERRITORIES AND DEPENDENCIES		
French West Africa.....	1,789,186	18,729	Denmark—		
Madagascar.....	227,800	4,776	Greenland.....	840,001 ¹²	26
Réunion.....	969	278	France—		
Portugal—			Guadeloupe and dependencies	687	230
Angola.....	481,352	4,280	Martinique.....	425	240
Cape Verde Islands.....	1,557	172	St. Pierre and Miquelon.....	93	5
Mozambique.....	302,329	6,030	Netherlands—		
Portuguese Guinea.....	13,948	541	Netherlands Antilles.....	371	189 ⁶
São Tomé and Príncipe.....	372	58 ⁶	United Kingdom—		
Spain—			Bermuda.....	20	41
Possessions in North Africa.....	82 ⁶	143	British Honduras.....	8,867	79 ⁶
Spanish Guinea.....	10,831	208 ⁶	British West Indies—		
Spanish West Africa ⁷	115,975	83 ⁶	Bahama Islands.....	4,400	94 ⁶
United Kingdom—			Barbados.....	166	229
Basutoland.....	11,716	627	Jamaica and dependencies.....	4,706	1,565 ⁶
Bechuanaland.....	274,981	324 ⁸	Leeward Islands.....	422	128 ⁶
British Somaliland.....	68,000	640 ⁶	Trinidad and Tobago.....	1,980	721
Gambia ⁹	4,003	285 ⁶	Windward Islands.....	826	309 ⁶
Gold Coast (now Ghana).....	78,802	4,191	United States—		
Kenya ⁹	224,960	6,048	Alaska.....	586,401	209 ²
Mauritius and dependencies.....	809	566	Canal Zone.....	553	53 ³
Nigeria, Federation of.....	339,169	31,254	Puerto Rico.....	3,435	2,263 ³
Eastern Region.....	29,484	7,500	Virgin Islands (U.S.) ¹³	133	24 ³
Lagos (Federal Capital).....	27	300			
Northern Region.....	264,282	17,080	America, South		
Western Region.....	45,376	6,374	Argentina.....	1,072,748	19,111
Rhodesia and Nyasaland, Federation of.....	487,640	7,069	Bolivia.....	424,163	3,198
Northern Rhodesia.....	288,130	2,130	Brazil.....	3,287,204	58,456 ¹⁴
Nyasaland.....	49,177	2,540	Chile.....	286,397	6,761
Southern Rhodesia.....	150,333	2,399	Colombia.....	439,520	12,657
St. Helena and dependencies.....	119	5	Ecuador.....	104,506 ⁹	3,675
Seychelles and dependencies.....	156	39	Paraguay.....	157,047	1,565
Sierra Leone ⁹	27,925	2,050 ⁶	Peru.....	482,259	9,396
Swaziland.....	6,704	223 ⁶	Uruguay.....	72,172	2,615
Uganda.....	93,981	5,508	Venezuela.....	352,143	5,774 ¹⁴
Zanzibar and Pemba.....	1,026	278			
TRUST TERRITORIES			TERRITORIES AND DEPENDENCIES		
Cameroons (Br. Adm.) ¹⁰	34,081	1,500	France—		
Cameroons (Fr. Adm.).....	166,796	3,146	French Guiana.....	35,135	28
Ruanda-Urundi (Belg. Adm.).....	20,916	4,280 ⁶			
Somaliland (Ital. Adm.).....	178,201	1,280			
Tanganyika (Br. Adm.).....	362,688	8,324			
Togoland (Br. Adm.).....	13,041	429			
Togoland (Fr. Adm.).....	22,008	1,080			

For footnotes, see end of table, p. 153.

34.—Areas and Populations of the Countries or Areas of the World 1955—continued

Continent and Country	Area	Population	Continent and Country	Area	Population
	sq. miles	'000		sq. miles	'000
America, South—concl.			Asia—concl.		
TERRITORIES AND DEPENDENCIES—concl.			FORMER MANDATED TERRITORY		
Netherlands—			United Kingdom—		
Surinam.....	55, 144	225 ^{4, 15}	Palestine.....	10, 459	1, 912 ²
United Kingdom—			Gaza Strip.....	78	325
British Guiana.....	83, 000	485			
Falkland Islands, excluding dependencies.....	4, 618	2 ⁶	MILITARY GOVERNMENT		
Asia			United States—		
Afghanistan.....	250, 966 ⁶	12, 000 ²	Bonin Islands.....	40	--
Bahrain.....	231	120	Ryukyu Islands.....	848	798
Bhutan.....	19, 305 ⁶	623			
Burma.....	261, 757	19, 434	Europe		
Cambodia.....	67, 568	4, 358	Albania.....	11, 100	1, 394
Ceylon.....	25, 332	8, 589	Andorra.....	175	6 ⁶
China.....	3, 745, 306	582, 603 ²	Austria.....	32, 374	6, 974 ³
Taiwan ¹⁶	13, 885	8, 907	Belgium.....	11, 779	8, 868 ³
India.....	1, 269, 645	381, 690	Bulgaria.....	42, 796	7, 548
Indonesia.....	575, 894	81, 900	Czechoslovakia.....	49, 351	13, 089
Iran.....	629, 345	21, 794	Denmark.....	16, 578	4, 439 ³
Iraq.....	171, 612	5, 200	Faeroe Islands.....	540	34 ³
Israel.....	7, 984	1, 748	Finland.....	130, 120	4, 241
Japan.....	142, 785 ⁹	89, 100 ³	France (Metropolitan).....	212, 822	43, 274
Jordan ¹⁷	37, 301	1, 427	Germany—		
Korea ¹⁸	85, 248	28, 000 ⁶	East Germany.....	41, 490	16, 700 ^{6, 6}
Kuwait.....	6, 000	203 ⁶	West Germany.....	94, 733	49, 995 ³
Laos.....	91, 506	1, 425	Saar.....	991	992 ³
Lebanon.....	4, 015	1, 425 ¹⁹	East Berlin.....	155	1, 300 ^{6, 6}
Maldives Islands.....	115	89 ⁶	West Berlin.....	186	2, 195 ³
Mongolian People's Republic.....	591, 121	1, 000	Greece.....	51, 182	7, 973
Muscat and Oman.....	82, 000	550	Hungary.....	35, 919	9, 805
Nepal.....	54, 345	8, 432 ²	Iceland.....	39, 768	158 ³
Pakistan.....	364, 797	82, 439	Ireland.....	27, 136	2, 909
Philippines.....	115, 600	21, 849	Italy.....	116, 304	48, 016
Qatar.....	8, 500	35	Liechtenstein.....	61	15
Saudi Arabia.....	617, 762	7, 000 ²	Luxembourg.....	998	309 ³
Syria.....	70, 014	3, 856	Monaco.....	0. 4	20 ²
Thailand.....	198, 456	20, 302	Netherlands.....	12, 529 ²⁰	10, 751 ³
Trucial Oman.....	32, 278	80	Norway.....	125, 065	3, 425 ³
Turkey (in Asia and Europe).....	299, 993	24, 122	Poland.....	120, 348	27, 278
Vietnam.....	127, 259	26, 300	Portugal ²¹	35, 599	8, 765
Yemen.....	75, 290	4, 500 ²	Romania.....	91, 700	17, 490 ²
TERRITORIES AND DEPENDENCIES			San Marino.....	24 ⁶	13 ⁶
Netherlands—			Spain ²²	194, 396	28, 976
West New Guinea.....	159, 375	700	Sweden.....	173, 622	7, 262 ³
Portugal—			Switzerland.....	15, 941	4, 977 ³
Macau.....	6	200 ⁶	United Kingdom—		
Portuguese India.....	1, 619	644	England and Wales.....	58, 345	44, 441
Portuguese Timor.....	5, 763	469	Northern Ireland.....	5, 459	1, 394
United Kingdom—			Scotland.....	30, 411	5, 133
Aden—			Vatican.....	--	1 ⁶
Aden Colony.....	80	140	Yugoslavia.....	98, 608	17, 628
Aden Protectorate.....	112, 000	650 ⁶	TERRITORIES AND DEPENDENCIES		
Brunei.....	2, 226	56 ⁶	Norway—		
Cyprus.....	3, 572	520	Svalbard and Jan Mayen Is. .	24, 101	12, ²³
Hong Kong.....	391	2, 340	United Kingdom—		
Malaya, Federation of.....	50, 690	6, 058	Channel Islands.....	75	102
North Borneo.....	29, 387	370 ⁶	Gibraltar.....	2	25
Sarawak.....	47, 071	614	Isle of Man.....	227	56
Singapore.....	286	1, 213	Malta and Gozo.....	122	314

For footnotes, see end of table, p. 153.

34.—Areas and Populations of the Countries or Areas of the World 1955—concluded

Continent and Country	Area	Population	Continent and Country	Area	Population
	sq. miles	'000		sq. miles	'000
Oceania			Oceania—concl.		
Australia (excluding aborigines)	2,974,583	9,201	TERRITORIES AND DEPENDENCIES—concl.		
New Zealand.....	103,564	2,136	United States—		
TERRITORIES AND DEPENDENCIES			American Samoa.....	76	223, ⁶
Australia—			Guam.....	206	373, ⁶
Cocos (Keeling) Islands.....	5	1	Hawaii.....	6,423	500 ²
Norfolk Island.....	14	1	TRUST TERRITORIES		
Papua.....	90,540	446	Nauru (Aust. Adm.) ²⁴	8	4
France—			New Guinea (Aust. Adm.)....	93,000 ²⁰	1,254
French Oceania.....	1,544	696	Pacific Islands (U.S. Adm.)...	687	64
New Caledonia and depend- encies.....	7,202	65	Western Samoa (N.Z. Adm.)..	1,130	97
New Zealand—			CONDOMINIUM		
Cook Islands.....	100	16	New Hebrides (Anglo-French)	5,700	54 ⁶
Niue.....	100	5			
Tokelau Islands.....	4	2	Union of Soviet Socialist Republics		
United Kingdom—			Union of Soviet Socialist Re- publics ²⁵	8,649,821	200,200 ²
British Solomon Islands.....	11,500	103 ⁶			
Fiji Islands.....	7,040	339			
Gilbert and Ellice Islands...	369	40 ⁶			
Pitcairn.....	2	--			
Tonga.....	269	54 ⁶			

¹ Inhabited and cultivated territory; 13,442 sq. miles. ² Latest official estimate. ³ *De jure* population. ⁴ Northern Zone only. ⁵ Excludes Walvis Bay. ⁶ Unofficial estimate. ⁷ Includes Southern Zone of former Spanish Morocco. ⁸ Includes population of Mafeking, the capital, which is located in the Union of South Africa. ⁹ Colony and Protectorate. ¹⁰ Administratively part of Federation of Nigeria. ¹¹ Includes Walvis Bay. ¹² Area of ice-free portion is 131,931 sq. miles. ¹³ Comprises St. Croix, St. John and St. Thomas. ¹⁴ Excludes Indian jungle population. ¹⁵ Excludes Indian and Negro population of the interior. ¹⁶ Comprises islands of Taiwan and Pescadores. ¹⁷ Includes West Jordan. ¹⁸ Includes Democratic People's Republic of Korea and the Republic of Korea. ¹⁹ Lebanese nationals only. ²⁰ Land area only. ²¹ Includes the Azores and Madeira Island. ²² Includes the Balearic and Canary Islands. ²³ Inhabited only during winter season. ²⁴ Held jointly by Australia, New Zealand and United Kingdom. Administered by Australia. ²⁵ Present territory which includes Tannu-Tuva, Southern Sakhalin and the Kurile Islands, the remainder of former Lithuania and former parts of Germany.

CHAPTER IV.—IMMIGRATION AND CITIZENSHIP

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing 1 of this volume.

PART I.—IMMIGRATION AND EMIGRATION

The standard material appearing in each Year Book under the heading of "Immigration Policy and Administration" is superseded in this edition by a special article which deals in detail with the history of immigration and the Immigration Act and Regulations.

DEVELOPMENTS IN CANADIAN IMMIGRATION*

The process of settlement in what is now Canada has been slow and discontinuous, its cyclical pattern formed by geographical factors and no less by internal and external political and economic circumstances which created periods of desire for and availability of settlers and immigrants.

Canada has four clearly defined east-west geographical regions, separated by topographical barriers and distinguished with respect to soil, forest cover, elevation, climate, resources and natural lines of transportation and communication. In the history of settlement, people did not move easily from one region to another but it is significant that, with the development of water and land transportation facilities, settlement eventually took place from east to west in defiance of the logic of geography.

These four regions are extensions northward of the far deeper regions that dominate the topography of the United States. They engendered similar processes of settlement, similar economic activities and life in both countries, though the peoples inhabiting them developed separate national existences. Such geographic and economic similarity, however, assisted a relatively free exchange of people across the political boundary.

The relative difficulty that Canada has encountered in attracting and holding both immigrant and native-born people may also be explained by considering the settlement of Canada and of the United States not as parallel but as integral processes. What is

* Contributed by the Department of Citizenship and Immigration.

now Canadian territory has lain on the periphery of a vast settlement area, the shifting centres of which are and have been to the south and have inevitably attracted and, to a lesser extent, continue to attract peoples from the periphery. The major migration from each country has been to the other.

IMMIGRATION TO CANADA

SETTLEMENT AND IMMIGRATION

Occupation of what is now Canadian territory had an uncertain start in the oldest British colony and the youngest province of Canada—Newfoundland—which was claimed by Britain in 1583. Permanent settlement, however, was long deferred. The foundations of Canadian population were laid by people French in origin and language, who today constitute over 30 p.c. of the population. They are unique in that they have been an indigenous, self-perpetuating society for more than 200 years. Their immigrant basis is estimated to have been no more than 10,000 settlers who arrived during the 150 years preceding the British conquest (1763). At that time the French population numbered about 65,000 from whom the present population of 4,628,378 (Census 1956), not to mention those who emigrated to the United States, is largely descended.

Most important in point of numbers and second in point of time, among the sources of Canada's population, have been immigrants of British Isles origin coming either directly from overseas or entering from the United States after one or more generations of settlement there.

The cession of Acadia (1713) to Great Britain was followed in 1749 by the establishment of Halifax as a military base, and the first British effort at colonization. Along with people from England came some 2,500 migrants from Germany who settled at Lunenburg. The way for larger settlement, however, was not finally cleared until the expulsion of the Acadians in 1755, the final capture of Louisburg in 1758 and the fall of Quebec in 1759. Soon after, thousands of new settlers came chiefly from the New England States, the first of the interregional movements which have been characteristic of the population relations of Canada and the United States.

On the eve of the Revolution of the Thirteen Colonies (1776), the population of what is now Canada was about 110,000 to which was soon added over 40,000 persons—disbanded troops, refugees and Loyalists who sought new lands and homes in the remaining British colonies to the north. Nova Scotia gained 22,000 and Cape Breton 400, New Brunswick, established as a separate colony in 1784, received 14,000, Prince Edward Island 600, Lower Canada 3,000 and Upper Canada 10,000. From 1783 to 1812 migration into the British colonies continued with the 'late Loyalists' gradually shading off into a migration of pioneer American farmers who came in the traditional search for new and better lands. Among these were German Mennonites from Pennsylvania who settled on the Grand River in what is now Waterloo County in Ontario. Another successful settlement was that of Colonel Thomas Talbot who had been given a grant of land on Lake Erie in 1803. Actual settlement there began, in 1809 with an influx of farmers from Pennsylvania, New Jersey, the Maritime Colonies and from the British Isles. Talbot Road was long one of the great roads through the province which attracted other settlers in quest of land.

Until 1815 migration from the British Isles remained small and was made up mainly of Scottish Highlanders many of whom came in groups such as the one led by Lord Selkirk which settled on Prince Edward Island in 1803. And between 1802 and 1828 some 25,000 Highlanders settled on Cape Breton Island which remains Highland Scottish to this day.

After the Napoleonic Wars a large migration set in from the British Isles to the North American Continent. Up to 1840 about 500,000 persons left for Canada and 420,000 for the United States; the peak year of departure for Canada was 1832 when immigrants numbered 66,000. But from 1834 until 1910 the annual British immigration destined to the United States always exceeded that to Canada. For instance, between 1846 and 1854, 1,750,000 persons left the British Isles for the United States and not quite 500,000 for Canada. These migrants were mainly from Ireland which was then suffering an extensive famine.

From 1670 to 1869 the territories that are now the Provinces of Manitoba, Saskatchewan and Alberta were governed by the Hudson's Bay Company and, except for the Scottish colony established in 1811 at Selkirk on the Red River, no attempt was made at settlement during that time. In 1869, two years after the British North America Act had united the Provinces of Ontario, Quebec, Nova Scotia and New Brunswick to form the nucleus of what is now Canada, these territories were acquired from the Company by the Canadian Government. Under the Homestead Act of 1872 and the Dominion Land Act of 1874 free, quarter-section homesteads were made available for which any head of family or adult person might acquire patent after three years subject to certain conditions of tillage. For a time, transportation difficulties and the attraction of the more prosperous United States diverted many of the arriving immigrants. The easier and therefore more popular route to the Canadian mid-west lay by rail through the United States by way of Chicago and St. Paul or by water to Duluth and then by rail to the Red River and from there by boat or stage to Fort Garry. But the completion of a railroad from Minneapolis and St. Paul to Winnipeg in 1878 was a step towards the solution of this transportation difficulty and the number of settlers mounted steadily.

Even though between the years 1874 and 1879 the first major settlements were established south of Winnipeg by some 7,000 German-speaking Mennonites from southern Russia who were accustomed to the steppe, and by a group of Icelanders who settled near Lake Winnipeg and in southern Manitoba, the immigration of this period was largely of people from Eastern Canada whose agricultural background was of farms won from timbered lands. Following the construction of the Canadian Pacific Railway which reached Winnipeg in 1882, development became more pronounced. Large-scale projects, assisted settlement, and religious enterprises brought thousands of settlers from the British Isles and Continental Europe. By 1891 the population of Manitoba and the North West Territories, which had been 118,706 in 1881, had reached 251,473, of whom only 11,150 were in what later became Saskatchewan.

Meanwhile in 1871 the colony of British Columbia had entered Confederation with a population of about 10,500. Until 1858, when the colony was created, the Hudson's Bay posts were the only evidence of the white man's presence west of the Canadian Rockies. The discovery of gold on the Fraser River and later in the Cariboo Creeks brought the first shifting wave of settlers of many different races from the United States and some overland from Eastern Canada. When the flow of gold slackened in 1865 and 1866 and Vancouver Island became united with the mainland, a fairly permanent nucleus had formed made up mainly of Americans but including also a 'solid' British group of Hudson's Bay Company officials as well as a Canadian-born element. It was during the subsequent road and railway building period that the first Chinese immigrants appeared in British Columbia, the beginning of the Asiatic element which later became a factor in that population. The Canadian Pacific Railway was completed to Vancouver in 1885, overcoming for the settler the great barrier of the Rocky Mountains.

The early 1890's in Western Canada was a period of stagnation and despair and immigration all but ceased. But when the Hon. Clifford Sifton became Minister of the Interior in 1896 he initiated a vigorous promotion of immigration and changes in economic conditions helped to ensure the success of the new policy. A long depression and decline in wheat prices was reversed after 1893 and general recovery of world markets brought increasing demands for wheat. In "Manitoba No. 1 Hard" the Canadian West had developed a wheat strain adapted to the conditions of growth in the western prairies and later developments of other famous strains helped to extend the areas of cultivation. The new immigration policy aimed especially at persuading American settlers to come to Canada. People from the United States had begun to drift in for some years as the more fertile lands in the Western States and free lands were becoming scarce. Their numbers increased rapidly as did migration to the West from the older Canadian provinces. Although agriculturists from Great Britain were also encouraged to come to Canada, from 1899 to 1903 Continental European entries were about double the British. This period saw the introduction of the first major change in the ethnic composition of the Canadian population since 1763. Beginning in 1895 several thousand east-Europeans arrived each year settling in southern Saskatchewan and Manitoba. They were part of the 'new' immigration to North America from Austria, Poland, Russia, Hungary, the Balkans and Italy in contrast to the 'old' immigration which had been largely from northern and western Europe.

From 1905, when the Provinces of Saskatchewan and Alberta were formed, to the beginning of World War I there was a period of great prosperity in Western Canada and, from all sources, Canada received the largest immigration in its history. The peak year was 1913 when 400,870 immigrants arrived, 150,000 of them from Great Britain, 140,000 from the United States and the remainder from Continental Europe. The amount of land granted in homesteads and pre-emptions on the prairies doubled from 1905 to 1911. Railways and roads were extended, farms bought, towns built, capital invested and the demand for labour and goods was high. The frontier moved every day.

The break in the flow of immigration from Britain caused by the War lasted until 1920 and from Continental Europe until 1921. However, during this period economic development and colonization continued rapidly because of the tremendous demand for wheat and many American settlers came to locate on the plains. The depression of 1920-23 brought the first recession of settlement, but when conditions improved the Peace River District and northern areas of the Prairie Provinces became the main targets of the land-hungry farmers' sons from the prairies as well as of new immigrants. Immigration reached a new peak between 1926 and 1929, although not the proportions of the prewar years. According to the census, about 20 p.c. of the newcomers to Canada between 1921 and 1931 settled in the cities and most of the remainder in rural Western Canada.

With the onset of the depression of the 1930's, immigration was almost totally arrested. During 1931-40 only 158,562 immigrants arrived compared with 1,230,202 in the preceding ten years. It is difficult to say to what extent this decline was caused by depressed conditions prevailing in Canada and elsewhere and to what extent it was caused by restrictive regulations, though the restrictions on immigration were, of course, imposed as a result of the depression.

Since the end of World War II, and especially during the period 1948-57, immigration increased markedly when it became evident that Canadian industry had accomplished the transition to a peacetime economy without serious dislocation and that a new postwar era of economic expansion was at hand. Canada's remarkable postwar economic growth,

based upon the accelerated development of mineral, forest and water power resources and the ancillary services of roads, railways, pipelines and townsites involved in a succession of huge projects—many in previously untapped hinterlands—provided the political and economic climate for a sustained wave of immigration mainly from the British Isles and Continental Europe that totalled 1,387,176 for the period 1946 to 1956 and will easily surpass 1,500,000 by the close of 1957. Some analysis of immigration during recent postwar years will be found in the statistical section immediately following this article.

IMMIGRATION AND POPULATION GROWTH

Along with the contribution of immigrants to the settlement of Canadian territory, immigration also has been associated with the peak periods of growth of the Canadian population. These peaks in turn have been related to certain important events in history—Frontenac's term of office, the American Revolution, the Irish famine, the first building of the railways, the colonization of the West, and finally to the industrialization and the opening of the hinterland of the Canadian Shield. Before 1869 immigration and the peaks of population growth it effected were incidental to the historical events noted. Since the turn of the century the growth of the population by immigration has been the result of government policies and of economic conditions occasioning them. The following statement gives the numerical and percentage growth of the population of Canada from 1851 to 1956. The percentage column indicates the cyclical character of this growth.

NUMERICAL AND PERCENTAGE INCREASE IN THE POPULATION, TEN-YEAR PERIODS
1851-1951 AND 1951-56

Period Ended—	Population		Increase		Period Ended—	Population		Increase	
	No.		No.	p.c.		No.		No.	p.c.
1851.....	2,436,297		...	...	1911.....	7,206,643		1,835,328	34.2
1861.....	3,229,633		793,336	32.6	1921.....	8,787,949		1,581,306	21.9
1871.....	3,689,257		459,624	14.2	1931.....	10,376,786		1,588,837	18.1
1881.....	4,324,810		635,553	17.2	1941.....	11,506,655		1,129,869	10.9
1891.....	4,833,239		508,429	11.8	1951.....	14,009,429 ¹		2,502,774 ¹	21.8 ¹
1901.....	5,371,315		538,076	11.1	1956 ²	16,080,791		2,071,362	14.8

¹ Newfoundland included in the total for 1951 but not for 1941; without Newfoundland the increase was 2,141,358 or 18.6 p.c.

² Includes Newfoundland.

EMIGRATION FROM CANADA

In considering the impetus to growth which Canada received from immigration, it must be noted that, compared with the United States, Canada has held relatively weak attraction for settlers for long periods. The preference of migrants for the United States pre-dates the emergence of Canada as a separate political entity, and many factors combined to form this preference. Climate and topography favoured the southern areas, as did the more advanced economic conditions in the United States. The pull of kinship and ethnic ties drew the migrants to settle near friends or relatives or near people from similar regions or countries of origin. The United States offered the prospective settler more favourable conditions of land purchase and tenure. With a more diversified economy it also offered more to the unskilled labourer who did not wish to be a farmer. The early extensive development of roads and navigation offered increasing economic opportunities.

In 1791 the United States had a population of 4,000,000 while the British colonies had about 220,000. As a group the British colonies had little economic or political integration, being divided in language and purpose and cut off from one another by geographical barriers. The territories west of Lake Ontario were unsettled and were left to the fur traders and the Indians. A small and scattered population had no prospect of economic self-sufficiency.

In 1839 Lord Durham contrasted conditions on both sides of the line. "By describing one side", he said, "and reversing the picture the other would also be described. On the American side all is activity and bustle On the British side of the line all seems waste and desolate"* Thousands of arrivals as they gained familiarity with conditions left again for the United States. Lord Durham placed the figure at 60 p.c.

From 1851 onward there are more exact measures of these out movements and their relation to population growth. Table 2 shows that while many immigrants continued to come to Canada between 1861 and 1901, a good number of them re-emigrated. It appears also that the natural increase of the Canadian population was partly offset by emigration of native-born.

Many reasons have been offered to account for this outflow. The Canadian Shield which extends throughout northern Ontario continued to be a barrier in Canada to the westward movement so characteristic of American settlement. The growth of industry was much inhibited by the small domestic market and the dominance of Great Britain in this area. The railway and land booms in the United States drew settlers westward from every part of the United States as well as from Canada and especially from Ontario. French-Canadians, who had begun to leave even before 1850, migrated in increasing numbers after 1873 for the textile mills in the New England States. New arrivals from overseas caught the prevailing spirit and joined the trek to that country. The industrial development of the eastern States, made possible by the western expansion, created a heavy demand for general labourers as well as for those with technical skills.

This earlier emigration was primarily in response to the attraction of new and cheap lands, but the movement of more recent times has been primarily urban. Even before 1914 various types of skilled and professional persons had begun to leave. Canadian railroadmen, engineers, artisans, nurses, teachers, clergymen, writers, doctors and actors had been locating in the United States and were being actively recruited by American employers.

World War I created special demands for labour. After the War the imposition of quotas on immigration by the United States cut the supply of immigrant labour on which American industry had come to depend but these restrictions did not apply to Canadians. During 1921-31 Canadians made up the largest group of immigrants into the United States from all sources, representing nearly one-quarter of the total. This trend was sharply reversed during 1931-41 when, it is estimated, there was a considerable excess of Canadians returning to Canada over the numbers who left for the United States.†

In the United States Census of 1950 the Canadian-born were the second largest group of foreign-born, constituting about 10 p.c. of their number. As for occupational distribution in 1950, both male and female Canadian immigrants to the United States were more fully represented in the professional, managerial and craftsmen groups than the United States labour force as a whole.

* Sir Charles Lucas, *Lord Durham's Report* (Oxford 1912), Vol. 2, p. 212.

† According to an estimate based on the United States Census, there was a net loss of 123,000 among the Canadian-born residing in the United States during the 1931-41 decade. Nathan Keyfitz, *The Growth of Canadian Population Studies*, Vol. IV, No. 1, June 1950, p. 60.

On the basis of the Census of Canada data, the balance of migration is summarized in the following statement.

POPULATION BALANCE SHEET, 1851-1956

Period	Births	Deaths	Immigration	Emigration (Residual)	Net Immigration	Population at End of Decade
	'000	'000	'000	'000	'000	'000
1851.....	...	...	...	...	...	2,436
1851-1861.....	1,281	611	209	85	+124	3,230
1861-1871.....	1,369	718	187	379	-192	3,689
1871-1881.....	1,477	754	353	440	-87	4,325
1881-1891.....	1,538	824	903	1,109	-206	4,833
1891-1901.....	1,546	828	326	506	-180	5,371
1901-1911.....	1,931	811	1,759	1,043	+716	7,207
1911-1921.....	2,338	988 ¹	1,612	1,381	+231	8,788
1921-1931.....	2,415	1,055	1,203	974	+229	10,377
1931-1941.....	2,294	1,072	150	242	-92	11,507
1941-1951.....	3,186	1,214	548	379	+169	13,648 ²
1951-1956 ³	2,106	633	783	184	+599	16,081

¹ Excludes extra mortality associated with World War I, estimated at 120,000. which became a province of Canada in 1949 and had a population of 361,416 in 1951.

² Excludes Newfoundland
³ Includes Newfoundland.

This apparently unfavourable balance of migration has given rise to a number of interpretations. Some students have thought that both immigrants and the Canadian-born migrants represented an 'overflow' and conversely that the numbers Canada has retained comprise its 'absorptive capacity', an idea which, superficially at least, verges on the tautological. Distinctions have been made between the movement of immigrants and Canadian-born, suggesting that the former displaced the latter and that, if there had been no emigration of the Canadian-born, natural increase without immigration would have been sufficient to give Canada the population it now has. Others have held that, given the opportunity to emigrate, the Canadian population would have been even smaller if it had not been for immigration.

The value of such studies is limited at least partly by certain unstated assumptions, by the scarcity of data, and because they involve the difficult theory that Canada's absorptive capacity is basically independent of that of the United States. It is suggested rather that the long processes of the settlement and economic development of the North American Continent must be considered as a whole and that political boundaries more often than not have had only secondary influence. Population movements into and within the areas of North America then are integral and not separate aspects of the distribution and re-distribution of people geographically and occupationally, in accord with the 'push' and 'pull' factors operating at any time in the whole or in its parts.*

In the aggregate, emigration and re-emigration from Canada have involved the movement of several million people, spread unevenly over a hundred years and more. The size of these movements and the fact that they have continued, might alone raise doubts that they could ever be explained by sole reference to conditions existing in Canada. It has been maintained† that "since 1851 Canada brought in several millions of immigrants

* Brinley Thomas, *Migration and Economic Growth* (Cambridge University Press, 1954), pp. 134-138. For an early formulation of such a thesis see *Annex to the Report of the Minister of Agriculture for 1889*, Apr. 14, 1890, in *State Papers, Emigration to Canada*.

† Herbert Marshall, testifying before the Standing Committee on Immigration and Labour, *Proceedings of the Standing Committee on Immigration and Labour*, May 14, 1947, p. 217. The Senate of Canada.

more than could be absorbed. This was a costly and confusing procedure but more serious maladjustments were prevented by the fact that there was an open door into the United States which acted as a safety valve to draw off the surplus."

In order to account for the emigration of Canadian-born a complementary logic has suggested that immigrants had displaced them,* although this theory shows little appreciation of at least the regional interrelationship of labour markets of the two countries. It has been suggested also that more consideration be given to the 'intention component' in migration. "One may wonder if suitable account has been taken of the destination of the immigrant; whether he will settle here or is *en route* to some other country after a longer or shorter period in Canada. This is an intrinsic difficulty arising out of the intention component of any definition of an immigrant that does not provide for a follow-up."†

This component in the main has been observable only in its results and its character is necessarily elusive if it is taken to involve more than what in retrospect appears to have been a misstatement of destination on the part of several million immigrants. It suggests, perhaps, that if in relation to immigration, consideration were given to the area of Canada alone, it would become as difficult to understand why millions should have moved into Canada as it is to understand emigration out of Canada by sole reference to conditions there, unless the target of the vast overseas migrations was in the first place "America", that is, the North American Continent.

It has been said respecting earlier migration that "it is the merest accident that millions of inhabitants of North America are living in their particular locality, for the considerations that led their ancestors to Virginia, Upper Canada, or the shores of the Missouri were frequently unbelievably trivial. A ship sailing on the day they reached the seaport, the destination of a chance acquaintance, or the suggestion of a propagandist led thousands to embark for New York, Quebec or New Orleans, while others *after their arrival* settled the matter whether they were to be Americans or Canadians, canal labourers, Kansas squatters, prairie farmers, or lumbermen in the wilds of New Brunswick or Minnesota."‡

It seems evident from the record that as immigrants developed a more marked sense of direction (after 1850 perhaps), British North America and Canada increasingly came to be seen in an ancillary or peripheral relation to the developing civilization of the United States. The concept 'Canada' has been of slow growth and this country's increasing emergence as an individualized and final destination began mainly at the turn of the century. However, immigration to America has had the force of a powerful myth which immigration to Canada, until very recently perhaps, has never had.

From this point of view the hundreds of thousands of immigrants who gave their destination as Canada were in effect giving Canada as their first destination in North America. This may seem a re-statement of the obvious. It seems to mean, however, that the number of immigrant entries and the number that left again do not necessarily constitute objective data for interpretations of absorptive capacity.

It may be noted finally that the intention component eventually must be explicable in terms of the individual immigrants. While the chance elements determining destination, referred to earlier, were evidently reduced as migration developed, mobility remains as a basic competitive asset of immigrants. The first aim of the immigrant always must be

* A. R. M. Lower, *From Colony to Nation* (Toronto, 1953), pp. 488-490.

† Nathan Keyfitz, *ibid.*, p. 47.

‡ Edwin C. Guillet, *The Great Migration* (New York, 1937), p. 204.

to make a living, wherever this might lead. As long as there are places where he may do so on more favourable terms than where he happens to be and, if the place is accessible, a little travel makes no difference. The new environment is a means to an end and means little to him. Most immigrants must find their own passage and make their own decision to migrate. A shorter or longer stay, even under normally difficult beginnings in Canada, mobilizes immigrants once more to seek what they might consider more favourable conditions in the United States. The history of planned colonization schemes and assisted passage schemes has, with some outstanding exceptions, been largely one of failures since the objectives of the individual migrants are usually at variance with the objectives of the organizer.

Immigrants to Canada, therefore, may for some time be undecided whether "to become a population". In the past it would seem that the decision has led many of them to the United States.

THE EMIGRATION OF CANADIAN-BORN

As previously noted, some students have held that Canadian emigrants to the United States were being displaced by immigrants, though this view has seemed to rest on mere assertion without specific documentation. It is also often said that the Canadian-born, as would any people living next door to another country whose standard of living is rising faster than its own, were bound to be drawn to the United States, especially in the absence of any restriction on movement. Whether a higher standard of living or higher salaries and wages are adequate explanations is questionable, since Canadian emigrants tend to go to cities where the cost of living is also higher than at home. It is held rather that Canada as a little-populated but relatively prosperous country with good educational institutions has not always been able to absorb the skills and energies it creates, and therefore has not been able to offer enough of the higher paid positions which the emigrants have sought in the United States.

It appears that Canadians may actually have prepared themselves for emigration. In a study made of six groups of university graduates of the period 1920-36, three groups showed an absolute increase in number—doctors, clergymen and engineers. Graduates in these groups were generally in demand also in the United States. The other three—'lawyers unfamiliar with American law, dentists confronting the home of modern dental science, and pharmacists facing a profession unnaturally inflated by Prohibition'*—declined in number.

If the concept 'Canada' has been slow to assert itself against 'America' in the minds of overseas migrants, the Canadian-born on the other hand who left for the United States did not migrate to a 'foreign' country. He seems to have behaved rather like other North Americans. Historically, the emigrant going to the American Colonies before 1776 might be going to the Maritimes, Newfoundland, or what are now the American Atlantic States and continue to move between these areas. After the American Revolution, movement from British North America technically became emigration. While political conditions, of course, have not been without effect the evidence is abundant that both Americans and Canadians, until the most recent times, have tended to ignore the boundary when it stood in the way of their individual purposes. Their growing nationalisms have lacked the reinforcements of profound differences in history, ethos and language which exist elsewhere, and the open border has been evidence of their inconclusive character quite as much as it is symptomatic of the profound interrelationship of the labour markets of the two countries. The numerical imbalance of the exchange of population which has favoured the United States is, from this point perhaps, relatively unimportant. However, as Canada in its growth is beginning to match the powerful pull exerted by American industry,

* Marcus Lee Hansen, *The Mingling of the Canadian and American People* (Yale University Press, 1941), p. 262. Cf. DBS, *Supply and Demand in the Professions in Canada*.

educational institutions, diversified social life and standards, this migration may be reduced although perhaps never permanently arrested. Some might not even consider this desirable. Whatever the combination of causes may be, from 1930 to 1950 there was a decline in the emigration of Canadian-born. The largest number of Canadian-born ever recorded in the United States Census was 1,278,512 in 1930 (not including Newfoundland). In 1940 it had declined to 1,044,119, and in 1950 to 994,562. From 1950 to July 1, 1955, however, the number of Canadian immigrants was between 130,000 and 140,000, bringing the total Canadian-born population in the United States once more to over a million, after allowing for deaths and emigration since 1950.

The decline in emigration becomes more meaningful when the emigrants are taken as a percentage of the growing Canadian population. The number of Canadian-born in the United States as a percentage of the number of Canadian-born in Canada had reached its maximum at the beginning of the present century when the figure was 25 p.c. In 1930 it was 15.8 p.c. and in 1950 it was only 8.3 p.c.

In summary of the period 1941-51, the natural increase in the population amounted to 1,972,394 or 92.1 p.c. of the 2,141,358 population increase in Canada (not including Newfoundland). The balance amounting to 168,964 represents the estimated excess of immigration over emigration for this period. Actual immigration between the 1941-51 Censuses was 547,882. Hence apparent emigration from Canada to other countries over this decade was 378,918. It is not possible to determine exactly how many of these emigrants were Canadian-born and how many were of immigrant origin. The following statement gives an indication of the relative proportions of native-born and non-Canadian-born among the emigrants at the Census dates 1941 and 1951.

The statement shows the difference between the expected and actual population at the 1951 Census of Canadian-born, British Isles-born and United States-born. The amount of the total difference who were Canadian-born was 229,272 or 60 p.c. It would seem, then, that emigration for the decade 1941-51 was composed of about three-fifths Canadian-born and two-fifths non-Canadian-born persons.

ESTIMATED PROPORTIONS OF CANADIAN-BORN AND NON-CANADIAN-BORN
AMONG EMIGRANTS, JUNE 1, 1941 TO JUNE 1, 1951¹

Item	Birthplace				Total
	Canada	British Isles	United States	Other Countries	
	No.	No.	No.	No.	No.
Census..... 1941	9,487,808	960,125	312,473	746,249	11,506,655
Immigration..... 1941-51	...	194,343	53,257	300,282	547,882
Births..... 1941-51	3,186,405	...	...	...	3,186,405
Deaths..... 1941-51	897,155	166,319	36,421	114,116	1,214,011
Estimated population..... 1951	11,777,058	988,149	329,309	932,415	14,026,931
Census..... 1951	11,547,786	910,432 ²	281,035	908,760	13,648,013
Difference between estimated population and 1951 Census figures.....	229,272	77,717	48,274	23,655	378,918
	p.c.	p.c.	p.c.	p.c.	p.c.
Estimated emigration.....	60.6	20.5	12.7	6.2	100.0

¹ Latest figures available since birthplaces were not recorded at Census of 1956. reporting Republic of Ireland as birthplace.

² Includes 24,015 persons

ABSORPTIVE CAPACITY

Enough has been said, perhaps, to suggest that net immigration has been no clear index of Canada's absorptive capacity and that the development of immigration could scarcely be based on some of the interpretations offered of past experience.

In 1947 it became evident that the transition in Canada from a wartime to a peacetime economy was taking place without any serious dislocation. It also became evident that the expansion might be sustained if the financial resources could be matched by labour power and a large population increase. In this, two trends had to be taken into account—the decline over several decades of the rate of natural increase and the historic problem of emigration. Also a relatively short-term problem had to be met by specific measures. The unusually low birth rate during the depression years had created a shortage of persons in the age groups entering the labour market during the latter part of 1941-51 decade. Immigration was therefore encouraged to relieve both the short-term problem and serve long-range objectives. The continuing expansion of the economy continues to absorb large numbers of newcomers who have not only made up for the lack of Canadian workers but have utilized the opportunities offered by the Canadian economy through capital they have brought with them, through the application of special skills and trade processes and through their mobility. By the establishment of new businesses, and the introduction of improved and new processes, they have created additional consumer demands and products.

By the end of 1954, over 1,000,000 people had entered Canada since 1947. In addition, the native-born children of these immigrants in the same period are estimated at some 200,000. This represents a very substantial addition to the body of Canadian consumers and an advance toward the development of mass markets for goods and services. It is also noteworthy that the bulk of immigrants is concentrated in the taxpaying and heavy consuming age groups, a factor that will help to reduce the high overhead costs of maintaining the Canadian standard of living at its present level.

It is in such considerations that operating principles of fitting immigration to absorptive capacity may be found rather than in theories which aim at some final figure of how many might be absorbed or have been absorbed in the past.

Along with the need for compromising between the short-term and long-term objectives of immigration, the implementation of the immigration policy has had to be adapted to such considerations as the availability of transportation, the availability of suitable immigrants who are usually the desirable citizens in their home countries, the degree of tolerance of other countries to being considered a recruiting ground for immigrants to Canada, the decline of both 'push' and 'pull' forces because of the gradual improvement in economic and social conditions in most western countries, the willingness or otherwise of the Canadian people to accept some or all types of immigrants, and many other similar factors.

GROWTH OF IMMIGRATION LEGISLATION

Canada passed her first Immigration Act in 1869 (32-33 Viet., c. 10), two years after Confederation. Principles embodied in this and in succeeding Immigration Acts are in large part deeply rooted in the earlier experience with immigration. The next comprehensive legislation was the Act of 1910 (9-10 Edw. VII, c. 27) which, with amendments, was in force until it was superseded by the present Immigration Act (R.S.C. 1952, c. 325). In tracing some of the additions and changes that led to the Act and Regulations at present in force, it should be kept in mind that throughout the years the motives of migrants, requirements of the receiving country, problems of control, health, welfare, assimilability, protection of the immigrants and of the native community have remained fundamentally unchanged.

EARLY CONTROL MEASURES

There was at first no legislation of any kind to govern the entrance of people into what is now Canada. The earliest measures had their origin in the conditions of ocean transportation.* While of considerable interest to the struggling colonies, this was a problem chiefly for the Imperial Government. Meanwhile the failure to control shipping gave rise

* Stanley C. Johnson, *A History of Emigration* (London 1913), Chap. V.

to quarantine and related measures at the receiving ports of Halifax, Quebec, Saint John and Montreal. The usually destitute condition of the arriving immigrants, related to the continuing frightful conditions of shipping and to the general poverty of those who were forced to migrate from the British Isles, also prompted local regulations.

Until the 1820's the British Government was officially opposed to emigration, though military considerations resulted in some Canadian settlements. When the outlook changed, emigration was seen rather as an alleviation for misery, unemployment and pauperism at home than as a means of advancing the interests of the colonies. The colonies, on the other hand, welcomed the fit and intelligent for whom there was no lack of employment. But there were increasing protests against the unloading of the destitute, the paupers and the unfit who were variously assisted to leave for Canada and the United States because they were a burden at home. The early adoption by several American States of protective measures resulted in thousands of the latter being diverted to Canadian ports. In 1831-32 at least 20,000 arrived.*

It is evident that the floods of newcomers even under the best of conditions would have created problems for those who preceded them. The receiving situation was worsened by the effects of the horrifying conditions of travel of that time. Before the middle of the 19th century, voyages were arduous and dangerous and long journeys were difficult and expensive. In the 17th century a trip from France to Canada took about two months, and as many as 40 to 50 p.c. of the passengers died during the voyage. Around the middle of the 19th century the average passage took about a month and a half and deaths at sea were still commonplace. Ships were few, small, crowded and lacked sanitary facilities and were known as "floating coffins".

Preparations for immigrant reception and distribution were inadequate. The port cities and districts were often overcrowded and their resources drained in caring for and protecting themselves against the newcomers. Lower Canada, Nova Scotia and New Brunswick naturally bore the chief burden though Upper Canada, more remote and especially in need of labour, did not always agree with the protest of the lower provinces.

During the season of immigration the threat of smallpox, typhus, cholera and other diseases hung continually over Canadian ports. Demands for regulation gained special force with the repeal of the Passenger Vessels Act in 1827. It was soon evident that the ship owners were unable to govern themselves. In the summer of the year crowds of newcomers reached Halifax, Quebec and Montreal starving, diseased and dying. Disease spread and 800 of a population of 11,000 died in Halifax alone. New Brunswick fared little better. While a new Imperial Statute was passed to govern transport, Nova Scotia decided on a law of its own. An Act in 1828 provided that no passenger could be landed until the master of the vessel had entered a bond of £10 for every person who within a year became a public charge "by reason of disease, bodily infirmity, age, childhood or indigence".† Penalties were provided for evasions. Continued protests led to legislation by Nova Scotia, New Brunswick and Lower Canada a few years later, imposing a head tax on every immigrant, the funds to be used for the care of the sick and destitute coming off the ships and for forwarding them to their destinations. A need for such funds arose almost immediately when Asiatic cholera broke out in Britain and was carried with tragic results to the colonies in 1832. Thus the state of health of arriving immigrants generally and epidemics in particular clearly showed the necessity of quarantine and hospital quarters as being inseparable from immigration. Makeshift hospitals and pest-houses were established and the temporary facilities of 1831 at Grosse Île below Quebec were made permanent and were not superseded until about seventy years later. Despite various legislation passed by the British Government there was little improvement. It was undoubtedly the Irish who suffered most. In 1847 out of 90,000 immigrants embarking for Canada in British vessels, 15,000 died on the way.

* Norman Macdonald, *Canada 1763-1841* (New York, 1939), p. 24.

† J. S. Martell, *Immigration to and Emigration from Nova Scotia 1815-1838* (Halifax, N.S., 1942), pp. 22-23.

The period before 1850 also marked the beginning of an immigration service. In 1827 the Colonial Office appointed a Chief Agent at Quebec. A description of his duties and activities gives the substance of certain activities and services rendered directly and indirectly today by officers of the Department of Citizenship and Immigration. The agent was "to receive emigrants on landing, give out landing money, if any, clothe and feed the starving, hear complaints and bring proceedings against defaulting shipmasters, keep in touch with those needing employment, help the newcomers to find their friends and tranship them to their destination, and have all carefully recorded. He exceeded his official duties by compiling valuable information regarding available locations, state of roads, distances and expenses. He invited land owners to register their saleable property with him. His office became an indispensable clearing house for distressed and anxious strangers, and saved them from being exposed to the gross misrepresentations of land jobbers"* The agent also instituted information bureaux along the routes to the West to advise intending colonists and to afford shelter to the sick while travelling. Pamphlets on settlement were also published.

Until 1869 the head tax authorized in 1831 and the provisions for quarantine remained the main protective measures. The amount of the tax varied frequently but the principle was retained and appears in the Immigration Act of 1869.

At Confederation in 1867 the Federal Government assumed responsibility for the inspection and quarantine establishments of the provinces, for immigration agents and other measures developed up to that time.

THE PROTECTION OF IMMIGRANTS

While the amelioration of transport conditions was necessarily a matter for the great shipping nations, Canadian immigration legislation has always embodied provisions against some major abuses, which British and American legislation also aimed to control. As early as 1802-3 a British Parliamentary Committee sat to inquire into the transport trade and showed the need for immediate legislation. The Passenger Vessels Act of 1803 (43 Geo. III, c. 56) initiated a struggle with the ship owners and diverse other interests which was to last more than half a century and left conditions little better than they had been in the beginning. The abuses which successive inquiries revealed and successive Acts attempted to control became once more the concern of a Royal Commission in 1851. It was found that, along with the deadly overcrowding of ships, the emigrant had become a general object of exploitation. At the point of embarkation he was set upon by 'crimps', a sort of specialist in defrauding emigrants and familiar with every device for extorting money. Tickets were sold for non-existent ships or such as had sailed already. Emigrants were sold useless gear or passage tickets at exorbitant prices. Crimps offered also to change their money, 'dollaring' their victims, or enticed them to confederate boarding houses where more of their funds would be taken from them and where they were sometimes directly robbed. At sea exploitation continued. Rations were doctored or were insufficient in quantity, money was extorted for necessities, uncooked food supplied to exact money for use of cooking fires; in addition, bullying and physical maltreatment were not uncommon. Few dared to complain and the law was slow. Often ships dumped their passengers at wrong ports, hundreds of miles from their destination or on deserted beaches. On landing, the 'new world' version of crimps, porters and runners would begin the process of exploitation all over again.

While transport to Canada had not been given any special study since *Lord Durham's Report*, sufficient was known of specific abuses to make provisions for the protection of immigrants at Canadian ports. Although shipping conditions were improving as steamships superseded sailing vessels by providing a third class or steerage type of accommodation, there was a constant incentive to utilize the maximum of ship space at the expense of passenger welfare. The Immigration Act of 1869 established the number of passengers

* Norman Macdonald, *ibid.*, p. 21.

a ship might carry as one adult per 12 feet of clear superficial deck available for passenger use (later changed to 15 feet) and not occupied by stores or other goods, or one person per two tons of capacity. An adult was defined as a person over 14 years of age, or two persons over one year but under 14 years. These provisions have remained standard to the present day.

No passenger was to debark until a passenger list supplied by the master of the vessel had been checked and the ship inspected by quarantine officers. The passenger list was to include the names of heads of families and the number of persons accompanying them, occupation, country of origin and destination; also the names and similar details for all single persons.

The Act also provided for payment of a head tax of \$1.00 or \$1.50 according to whether the person had left with or without the approval of the authorities at the port of embarkation. The Act provided that immigration officers might spend sums of money for food, clothing, transportation and for other assistance to intending settlers. Immigrants were permitted to remain on board ship with their baggage for 48 hours after arrival (later changed to 24 hours) until they could continue their journey or find accommodation, and their baggage was to be unloaded free of charge and at a reasonable hour of the day. Masters of vessels were required to give a detailed report of any immigrant dying *en route* to Canada and to account for the personal effects of the deceased. For the further protection of immigrants, penalties were set out for the master and crew of vessels who in their dealings with immigrants violated the laws of the country in which their home port was situated or were otherwise found guilty of a breach of the contract with their passengers. Only specially licensed persons were permitted to solicit the business of immigrants and inns and boarding houses which received immigrants were obliged to post a list of prices to be charged. A lien was not permitted on the effects of an immigrant for a debt for board and lodgings for any sum exceeding five dollars.

The measures of 1869 aiming at protection of immigrants were elaborated from time to time and new ones added, among them provisions for the protection of women immigrants aboard ship and for the control of the sale of intoxicating liquors to incoming steerage passengers.

OBLIGATIONS OF TRANSPORTATION COMPANIES

Traditionally, shipowners, shipping companies and railway companies have been among those most interested in the promotion of immigration and the recruitment of immigrants. Earlier, when the activities of the agents of such companies were uncontrolled they were not always conducive to the welfare of the immigrants or of the receiving country. Having regard for the fact that for a long time there were few effective restrictions on the movement of people and also that in more recent times, before and immediately after World War I, some companies engaged in promotion and recruitment under official arrangements, it is evident that rigid conditions and obligations should have been imposed to assure that the immigrants brought to Canada be found acceptable and in conformity with the laws, regulations and requirements. Failing this, responsibility for their return was made to devolve almost entirely upon the transportation companies who brought them.

It was only with the assumption of major responsibility for the promotion of immigration, of recruitment, selection and processing of immigrants by the Government of Canada that the liabilities of the transportation companies have been reduced.

RESTRICTIONS ON ENTRY

The Act of 1869 foreshadowed those restrictions on entry which have developed into the prohibited classes of today. It was required that the passenger list show whether the ship carried any person who was insane, idiot, deaf-mute, blind or infirm and whether accompanied by parents or relatives able to support him. If any such person were likely

to become a public charge the Collector of Customs might exact a bond of \$300 from the master of the ship to reimburse the country for any expenses on his behalf incurred during the following three years.

The most significant innovation was, perhaps, the prohibition of the landing of indigents or paupers unless the master of the ship deposited funds sufficient for the temporary assistance and travel to destination of such immigrant. This provision was not applied until 1879-80, but it contained the principle of exclusion.

Succeeding Acts and Regulations in 1886, 1902, 1905, 1906, 1907, 1908, 1909 and 1910 extended both the protective and restrictive provisions. Among the more significant developments may be mentioned the requirement of a sum of money as a condition of entry as distinct from head taxes, and in the passage in 1891 (implemented in 1900) of an Order in Council permitting the prohibition of all pauper immigration. An Act of 1905 made it a punishable offence to circulate, in a country outside Canada, false representations intended to encourage or prevent immigration into Canada. Prohibited classes were elaborated in several categories, chiefly medical, in the Act of 1906 and in the Act of 1910 and remain substantially the same today. In 1906 also the immigration of foreigners under contract to perform labour in Canada was prohibited.

RESTRICTIONS RELATING TO ASSIMILABILITY

What was probably the first Canadian expression of concern regarding the assimilability of immigrants was the protest of the Nova Scotia Assembly in 1815 addressed to the British Government against bringing in additional negroes from Bermuda. It was stated that "the proportion of Africans already in this country is productive of many inconveniences; and (that) the introduction of more must tend to the discouragement of white labourers and servants, as well as to the establishment of a separate and marked class of people, unfitted by nature to this climate, or to an association with the rest of His Majesty's Colonists".*

It may be of interest also that the first examination of immigrants on political grounds was applied not to overseas migrants but to Americans. In 1794, after the American Revolution, Commissioners were appointed and given discretionary powers to examine at the border and reject those who seemed unlikely to become loyal and suitable settlers.

When during the latter part of the 19th century the racial and ethnic composition of immigration began to change, doubts developed regarding the assimilability of certain newcomers and the economic and social consequences that might result from too drastic a change in the character of the Canadian people. Chinese immigrants arrived in British Columbia in the 1870's and from 1885 onward they were made subject to increasingly heavy head taxes until 1927 when, with the passage of the Chinese Immigration Act, they were virtually excluded. Japanese immigration began in 1896, chiefly to British Columbia, and was made subject to a series of 'gentlemen's agreements' from 1908 onward which restricted the number of such immigrants until an agreement in 1928 limited entry to 150 yearly. A few thousand East-Indians arrived during the first decade of this century and they too were made subject to head taxes. Their near exclusion was finally effected by an Order in Council under the Act of 1910 which provided that any immigrant who came to Canada otherwise than by a continuous journey from the country of which he was a native or citizen might be excluded. An Order in Council in 1919 created a general excluded class of immigrants deemed undesirable because of climatic, industrial, social, educational, labour or other conditions or requirements of Canada or deemed undesirable because of their customs, habits, modes of life and methods of holding property and their probable inability to become readily assimilated. Since 1923 the restriction on negroes has been effected by limiting the term "British subject" to Commonwealth countries with predominantly white populations. Restrictions on the entry of non-white British subjects has been a difficult problem since it was thought to involve the rights of British subjects to move freely from one part of the Commonwealth to another.

* J. S. Martell, *ibid.*

The Chinese Immigration Act was repealed in 1947 and certain other restrictions lifted. In 1951 special agreements were reached with the Commonwealth countries of India, Pakistan and Ceylon respecting the entry of their nationals. Conditions governing the admission of non-Europeans are given at pp. 172-173.

Before World War I the most important criterion of selection applied to those who did not fall into prohibited categories was their suitability as farmers. After the War, while this still remained important, selection was exercised also according to whether applicants for entry belonged to "preferred" or "non-preferred" countries. Traditional affinities with the United Kingdom and the United States naturally favoured immigrants from these countries. Citizens of France were added later to this category.* Next in order of preference came immigrants from northern and western Europe who were not too different in language and mode of life, followed by those from central and eastern Europe and by those of southern Europe including Greece, Italy, Syria and Turkey. Jews, regardless of citizenship, were treated separately.† These groupings may be compared with the currently admissible classes (p. 172).

After World War I fundamental changes were introduced also in methods of recruitment and in regulative measures. Canada took somewhat longer to recover from the War than the United States and until 1923 immigrants other than those going to assured farm work or domestic service were required to have stated sums of money. The immigration from 1923 onward was governed chiefly by two Orders in Council of Jan. 1, 1923: one established the passport and visa qualification as a condition of entry for other than British and American citizens; the other rescinded the earlier money requirement and provided that *bona fide* agriculturalists with funds, farm workers with reasonable assurance of employment, domestics, the wives and children under 18 years of age of Canadian residents and sponsored relatives might be admitted. Generally admissible, provided they had sufficient means until they could find employment, were United States citizens and British subjects within the meaning of the Act. None of these provisions applied to persons of Asiatic race.

One feature of the immigration policy of the 1920's was the promotion of British immigration under the Empire Settlement Act, which was passed by the British Parliament on May 31, 1922. Until 1931 some 130,000 persons came to Canada under various agreements under this Act though indirectly the Act also promoted unassisted immigration which by far outnumbered the assisted. Among other reasons, its relative lack of success was perhaps the fact that it aimed at land settlement at a time when Canada was becoming an industrial nation.

Under a series of agreements from 1925 onward, the recruitment and forwarding of immigrants from the "non-preferred" central, east, south and southeast European countries was given to the Canadian railways. The railways appointed Certificate Issuing Officers who examined potential immigrants at internal points and, if found suitable as agriculturalists, issued certificates to this effect with assurance of employment on arrival in Canada. Since the Government reserved the right to deny admission at the port of entry on grounds of health, morals and other provision of the Immigration Act, the railway officers also had to assure themselves regarding validity of passports of the immigrants, their literacy, physical and mental fitness and their general eligibility under the Act. The role of the Canadian railways in the promotion of immigration and in the settlement of the West has been far-reaching and outstanding.

With the onset of the world depression of the 1930's, several increasingly restrictive Orders in Council were passed. An Order of Aug. 7, 1929, prohibited the landing in Canada of any immigrant coming under contract or agreement, express or implied, to perform labour or service of any kind in Canada. This regulation, however, did not apply to farmers, farm labourers or houseworkers or to any contract labourer whose service was considered required in Canada. Then, in August 1930, immigration from Europe was

* P.C. 4186, Sept. 16, 1948 as amended by P.C. 5593, Dec. 10, 1948.

† H. F. Angus, "Need for an Immigration Policy" *The Annals of the American Academy of Political and Social Science*, Sept. 1947.

suspended except for practical farmers with sufficient capital to establish and maintain themselves on farms in Canada, and for wives and children under 18 years of age of family heads already established in this country. No change was made in the regulations applicable to immigrants from the British Isles or the United States, but solicitation of immigrants was generally discontinued.

THE IMMIGRATION ACT AND REGULATIONS

The division of powers agreed upon under the British North America Act of 1867 assigned to the Federal Government those matters which affect the country as a whole and to the provincial governments matters affecting the provinces themselves. Thus the Federal Government may pass laws respecting immigration into any or all the provinces while the provinces may pass laws affecting immigration into their jurisdictions, provided that such statutes do not conflict with the federal laws. In practice regulation of immigration has been left to the Federal Government.

The two federal statutes which at present govern immigration into Canada are the Department of Citizenship and Immigration Act (R.S.C. 1952, c. 67) and the Immigration Act (R.S.C. 1952, c. 325). The former provides that the Minister of Citizenship and Immigration through his department shall be responsible for all matters of federal jurisdiction with respect to immigration, unless any specific matter has been assigned by law to another department for administration purposes. The Immigration Act of 1952 replaces the earlier Act which had become unwieldy because of accumulated amendments. Changes were required also because of new conditions such as travel by air.

The Immigration Act sets out the terms and conditions under which any person, whether citizens, persons with domicile, immigrants or non-immigrants, may enter Canada; and, having entered, the circumstances in which persons other than citizens may be required to leave the country.

The Act accords no right to anyone to enter Canada as an immigrant. Categories of persons specifically prohibited from entering are clearly stated. The conditions under which others may be admitted are defined. While the Act provides for selection it is not primarily restrictive. Neither the Act itself nor the Regulations set any limits on the numbers which may be admitted. Similarly, the Act itself does not set numbers or quotas for any particular race, nationality or occupation. In the Regulations, however, certain preferences are indicated as to countries from which immigrants are most desirable and some entry provisions, otherwise applicable, are modified to facilitate the entry of such immigrants. This preference acts somewhat as a group test. The Regulations variously limit categories admissible from other groups of countries. Also agreements have been reached with certain Commonwealth countries whereby entry is limited to a specific number per year of their citizens, in addition to certain classes of close relatives of Canadian citizens. This has somewhat the effect of a quota.

All immigration into Canada is organized, that is, all immigrants are selected and the necessary machinery is provided for examination of immigrants abroad and for their reception on arrival.

The Act and the Regulations seek to extend certain protection to immigrants before they arrive in providing against fraudulent representations about conditions in Canada, protection *en route* and on arrival, as well as protection for those whose rejection or deportation may be considered or has been ordered.

The most important feature of the Act is its flexibility. While the Statute sets out classes prohibited from entering regardless of nationality, origin, occupation, the actual flow of immigration and classes of persons admissible are regulated under authority of Order in Council. Canada recognizes immigration as a means to an end. Changing conditions and emergencies relating to immigration may thus be met quickly by changes in regulations.

The Act is thus primarily an instrument for carrying out a policy. It follows that the policy actually stated and pursued by the government of the day is of first importance in determining the flow of immigration.

IMMIGRATION POLICY

The main outline of the policy which has been followed since the resumption of immigration after World War II was stated by the then Prime Minister, the Rt. Hon. W. L. Mackenzie King in a debate of the House of Commons on May 1, 1947. That statement in summary affirmed Canada's need for population and the intention of the government to attain a larger population through a program of immigration. Regarding long-term objectives it was stated that "apart from all else, in a world of shrinking distances and international insecurity, we cannot ignore the danger that lies in a small population holding so great a heritage as ours". Along with strategic considerations a larger population would help also to develop the country's resources and by providing a larger number of consumers would reduce the dependence on foreign trade. Respecting numbers of immigrants it was of the utmost importance to relate immigration to absorptive capacity, a factor that would vary from year to year in response to economic conditions. Regarding selection of immigrants the statement stressed that "Canada is perfectly within her rights in selecting the persons whom we regard as desirable future citizens. It is not a fundamental right of any alien to enter Canada." As to the sources of immigration: "There will, I am sure, be general agreement with the view that the people of Canada do not wish, as a result of mass immigration, to make any fundamental alteration in the character of our population. Large-scale immigration from the Orient would change the fundamental composition of the Canadian population", and "would, moreover, be certain to give rise to social and economic problems of a character that might lead to serious difficulties in the field of international relations".

IMPORTANT PROVISIONS OF THE IMMIGRATION ACT

The important provisions of the Act are now considered in greater detail. Sect. 20 to 31 of the Act provide for examination, inquiries and appeals respecting the status of immigrants under Sect. 5 of the Act which defines prohibited classes, and their status with respect to Sect. 61 of the Act and the regulations made under it which define admissible classes and conditions of entry.

Prohibited Classes.—Persons who are prohibited permanent entry include mental defectives and the mentally ill or those with a history of such illness, epileptics, persons afflicted with tuberculosis, trachoma, or any contagious diseases, immigrants who are dumb, blind or otherwise physically impaired. The entry of persons in some of these categories may be permitted if they have sufficient means of support or are taken care of by family members so as not to become public charges.

Also excluded are persons who have been convicted of any crime involving "moral turpitude" though age at conviction, time elapsed since and evidence of successful rehabilitation may be taken into consideration. Barred are prostitutes, homosexuals, pimps or, generally, persons seeking entry for immoral purposes, professional beggars and vagrants, persons who are public charges or are judged likely to become such, alcoholics, drug addicts, or persons who have trafficked in drugs, within the meaning of the Opium and Narcotic Drug Act, or are likely to do so. Prohibited entry are persons deemed likely to advocate the overthrow of the system of government by force or subversion, persons who are or have been associated with any subversive organization, spies, saboteurs, persons found guilty of high treason or conspiracy and in general persons who fail to comply with entry regulations.

Sect. 61 of the Act provides authority whereby the categories and qualifications required of persons seeking admission to Canada may be controlled. *Inter alia*, the Governor in Council may make regulations respecting medical and other examinations or tests and the prohibiting or limiting of the entry of those unable to pass them, respecting the terms and conditions of admission of persons who have received assistance to come to Canada,

respecting conditions and requirements as to passports or other documents and the possession of means of support. Furthermore, under Sect. 61 the Governor in Council is given the power to limit or prohibit the entry of immigrants for any or all of the following reasons:—

- “(g) (i) nationality, citizenship, ethnic group, occupation, class or geographical area of origin,
- (ii) peculiar customs, habits, modes of life or methods of holding property,
- (iii) unsuitability having regard to the climatic, economic, social, industrial, educational, labour, health or other conditions or requirements existing, temporarily or otherwise, in Canada or in the area or country from or through which such persons come to Canada, or
- (iv) probable inability to become readily assimilated or to assume the duties and responsibilities of Canadian citizenship within a reasonable time after their admission.”

Current Regulations.—The Immigration Regulations made pursuant to Sect. 61 of the present Act became effective June 1, 1953, by Order in Council P.C. 1953-859. As amended by P.C. 1956-785, May 24, 1956, they provide for the admission of immigrants as follows:—

- “(a) a person who is a British subject by birth or by naturalization in the United Kingdom, Australia, New Zealand, or the Union of South Africa, a citizen of Ireland, a citizen of France born or naturalized in France or in St. Pierre and Miquelon Islands, or a citizen of the United States of America if such person has sufficient means to maintain himself in Canada until he has secured employment therein;
- (b) a person who is a citizen by birth or by naturalization of Austria, Belgium, Denmark, the Federal Republic of Germany, Finland, Greece, Iceland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden or Switzerland or who is a refugee from a country of Europe, if such person undertakes to come to Canada for placement under the auspices of the Department or, if the Department has given its approval thereto, for establishment in a business, trade or profession or in agriculture;
- (c) a person who is a citizen by birth or by naturalization of Egypt, Israel, Lebanon, Turkey, or of any country of Europe or of a country of North America, Central America or South America if such person is the husband, wife, son, daughter, brother, sister, as well as the husband or wife and the unmarried children under 21 years of age of any such son, daughter, brother or sister, as the case may be, the father, the mother, the grandparent, the unmarried orphan nephew or niece under 21 years of age, the fiancé or fiancée, of a Canadian citizen or of a person legally admitted to Canada for permanent residence who is residing in Canada and who has applied for any such person and is in a position to receive and care for any such person; or
- (d) a person who is a citizen of a country other than a country referred to in paragraphs (a), (b) or (c) or in section 21, if such person is the husband, the wife or the unmarried child under 21 years of age, the father where he is over 65 years of age, or the mother where she is over 60 years of age, of a Canadian citizen residing in Canada who has applied for and is in a position to receive and care for any such person, but no such child shall be landed in Canada unless his father or his mother, as the case may be, is landed in Canada concurrently with him.

21. The Government of Canada having entered into an agreement with the Government of India, the Government of Pakistan and the Government of Ceylon with respect to the admission to Canada of 300*, 100 and 50 persons annually from such countries, respectively, the landing in Canada of persons from any such country is, notwithstanding section 20, limited accordingly to such numbers of persons, respectively, and in addition to the husband, the wife, or the unmarried child under 21 years of age, the father where he is over 65 years of age or the mother where she is over 60 years of age, of a Canadian citizen residing in Canada who has applied for and is in a position to receive and care for such person.”

It may be noted that any reference to Asians has been dropped. Their entry is governed under (d) above. It may be noted also that the provisions under Sect. 61 (g) of the Immigration Act quoted earlier, are no longer included in the Regulations, though it may be considered that their intent is expressed in the preferences and categories of persons admissible from different countries.

Examinations and Conditions of Entry.—Under Sect. 20 of the Act the admissibility of any immigrant is determined at the port of entry though a person may have undergone medical and civil examination by Canadian immigration officers abroad. Sect. 19 of the Regulations provides that the passing of any test or medical examination outside of Canada, or the issue of a visa or of a medical certificate, or of a letter of pre-examination has no conclusive value in actually determining admission at the port of entry.

* Effective May 6, 1957.

A system of pre-examination abroad has been in operation for many years and serves several purposes. It helps to eliminate those who are evidently unable to meet entry requirements before they embark and thus avoids the hardship that would result from rejection at the Canadian port. It makes possible more adequate selection, better regulation of the flow of immigrants in the light of seasonal and other variations in employment conditions and of course facilitates rapid processing of immigrants at Canadian ports.

The main objectives of the examinations are to determine that a person is in an admissible category with respect to his physical and mental health, his moral character, his status from the point of view of security, his employability with respect to the state of the labour market in Canada. Where a family is migrating all members must be examined at the same time, whether the head of the family precedes them or not, to avoid the risk of breaking up a family if one member were to be rejected. Winter unemployment because of the severity of the climate has long been a feature of labour conditions in Canada. The general aim, therefore, is to discourage the arrival of immigrant workers during the winter months. More recently, however, efforts have been made to bring in during this period those types of workers who are not affected by this seasonal slackening.

Sept. 18 of the Regulations provides that every person seeking to enter or land in Canada, except immigrants who are citizens of the United States, must be in possession of an unexpired passport issued by the country of which he is a subject or citizen. A travel document or a certificate of identification may be accepted for a stateless person or a refugee and for a woman who has become a British subject by marriage to a British subject domiciled in Canada. In addition, a valid and subsisting immigrant visa is required of all persons other than British subjects and citizens of France within the meaning of the Act, citizens of the United States, or persons who are legally admitted to the United States for permanent residence.

While British subjects and citizens of France within the meaning of the Act and citizens of the United States have not in the past been required to pass medical pre-examinations, though it was urged that they do so as a measure of facilitation, British subjects and citizens of France within the meaning of the Act are now required to have a prescribed medical certificate. Citizens and legal residents of the United States must now be in possession of a letter of pre-examination prescribed by the Minister.

The Immigration Act provides (Sect. 69) that the Department may make loans to immigrants to help defray the costs of transportation to Canada, from the port of entry to their destination and for their living expenses *en route*, the total outstanding amount not to exceed \$12,000,000. Such assistance, granted at first to heads of families only, has since been extended to include also family members and single persons. Loans are made on a repayment basis over a maximum period of 24 months. The record of repayment of these loans has been highly satisfactory.

The Regulations (Sect. 16) provide also that an immigrant shall not be admitted to Canada if he has received financial assistance from an organization, groups of persons or a person not accredited for this purpose by the Minister. Groups which, with official approval, have assisted immigrants since World War II include a number of church and voluntary organizations and some employers in need of workers, usually on a recoverable loan basis. However, most immigrants come without such assistance or are helped by relatives.

Rejection and Deportation.—As previously stated, immigration into Canada is not a matter of right and the Act defines two procedures of exclusion—rejection and deportation. Where a person applying for entry cannot be properly examined because of illness, the effects of alcohol, drugs or other cause, the examination may be deferred or the immigration officer may make an order for rejection. A person so rejected may, without prejudice, present himself subsequently for examination. With respect to deportation, however, unless an appeal is allowed, a person against whom a deportation order is made shall not be allowed to remain in Canada or, if deported, shall not be re-admitted without the consent of the Minister.

The causes which may lead to deportation are narrowed after a person has acquired domicile. A Canadian citizen cannot be deported. Canadian domicile is acquired by an immigrant after five years of continuous residence in Canada. Canadian domicile may be lost by voluntary permanent residence out of Canada, and may be forfeited by certain activities hostile to the State. Periods spent in a prison or in a mental hospital and periods during which a deportation proceeding is pending against a person are not counted towards the acquisition of domicile.

A person not a citizen may be deported regardless of length of residence and whether he has acquired domicile or not if he has been convicted under laws governing drug traffic, or if he is found to be a member of a subversive organization or engages in subversion by force or other means of democratic government as understood in Canada, or if he has been convicted of an offence involving disaffection or disloyalty to Her Majesty, or if he, outside of Canada, has engaged in activities detrimental to the security of Canada. Persons, who have not yet acquired domicile are liable to deportation if they fall into prohibited classes at the time of entry or within five years after having been landed, if they have engaged in commercialized vice, have been convicted under the criminal code, or have become inmates of prisons or mental institutions or persons who have gained entry by means of fraudulent documents or similar means.

Appeals are permitted in certain cases where deportation has been ordered.

STATUS OF IMMIGRANTS

Except for the right to vote in national elections, deferred until citizenship is acquired and for the liability to deportation referred to earlier, there are very few restrictions pertaining to the status of immigrants.

While immigrants in general are free to engage in any kind of work, there are some legal restrictions relating to employment in the Public Service of Canada and there may be others relating to work involving national security considerations. Immigrants who have received an assisted passage loan may be required to sign an undertaking to work for one year in a given type of job. This undertaking is between the immigrant and the government rather than between the immigrant and the employer.

Other restrictions, if any, are generally of a private nature and most often relate to a language handicap or to seniority systems in operation in a plant or factory. Recognition of immigrant professional persons by the governing bodies of Canadian professions has frequently been a matter of discussion and is too complex to be dealt with in detail here. Such recognition is often more easily secured by immigrants from the British Isles and from the United States than by persons from elsewhere, partly because of similarity of professional standards and practices and of language. Recognition is generally a matter to be settled between the individual immigrant professional and the relevant governing body of the profession.

Immigrants do not require any special work permit nor do they require any official identification cards, need not register with the police and in all respects have complete freedom of movement in the same way as Canadian citizens and are free to settle anywhere in Canada. Similarly no exit permits or any other official permission is required if an immigrant should decide to leave Canada permanently. Immigrants enjoy full legal rights and protection under the civil and criminal laws of Canada and the provinces. They may own or dispose of property, are protected and governed by laws applying to conditions of work, such as hours of work and minimum wages, and in general have the same rights, privileges and obligations as any other Canadian.

CITIZENSHIP

After four years and nine months of residence following landing, an immigrant may make application for Canadian citizenship which is usually granted if he possesses the required qualifications.

PLACEMENT OF IMMIGRANT WORKERS

The Immigration Branch, through its field services and with special reference to immigrants, maintains a continual survey of economic opportunities. This in conjunction with the information gained by the Department of Labour makes for fairly complete coverage of conditions throughout Canada relating to absorption of immigrants. Such information is forwarded to immigration officers abroad to guide them in the selection of applicants and in the regulation of the flow of admissions.

As additions to the labour force, immigrants are usually selected because there is demand for workers in the occupations they are able to fill. Selection, therefore, is not on a 'one job—one man' basis, except in special cases, and the immigrant worker is free to compete with others in the Canadian labour market. The facilities of the National Employment Service are equally available to immigrants and citizens.

The Settlement Service of the Immigration Branch is of particular interest to persons who aim to be self-employed. Immigrants, equally with Canadians, are free to engage in any type of business. They are subject only to the ordinary regulations and restrictions which govern the operation of any enterprise in Canada. Settlement Service officers located in all districts across Canada offer a wide range of assistance advising newcomers in matters such as the purchase of properties, financing and evaluating prospects of success.

ASSISTANCE AND INTEGRATION

One aim of successful integration is to equalize the position of immigrants with that of Canadian citizens. Satisfactory occupational placement to this end is essential. Newcomers being strangers in the country, however, will often require additional assistance and direction.

At the main Canadian ports immigration officers, railway officials, representatives of churches and volunteer groups and societies, and sometimes consular representatives of the immigrant's homelands are present to direct and guide newcomers to their destinations, assist families, help in locating relatives, shelter and jobs and generally give counsel and information. In nine cities the Immigration Department maintains halls for stopover purposes where immigrants may wait for travel or other arrangements to be made. In nearly every community where there are many newcomers, night classes in language and citizenship are conducted, organized usually under the provincial departments of education with the Government of Canada sharing the costs. Those isolated on farms or in the bush may take such courses by correspondence. Voluntary organizations assist the newcomers to become part of the social life of the community.

Having regard for possible hazards of settling in a new environment which immigrants may have to face, the Government of Canada, under a series of agreements with most provinces, shares on an equal basis for a period of twelve months the cost of medical care, hospitalization, temporary welfare and rehabilitation assistance for immigrants who have become destitute through no fault of their own, but do not have the required residence qualifications to benefit from the services normally applied to indigents by provincial and municipal governments. Moreover, the Department of Citizenship and Immigration is also empowered to provide financial and other emergency assistance under the same circumstances. Regulations have been relaxed so that immigrants receiving such assistance are not subject to deportation "on the sole ground of indigency". The Department may also provide emergency assistance, financial and other, to immigrants who within twelve months after landing and through no fault of their own, have become destitute because of unemployment or other misfortune.

Newcomers, regardless of citizenship, share alike with Canadians the benefits of all general social assistance measures in effect in Canada, though most of these involve a residence requirement. The three-year residence requirement originally contained in the Family Allowance Act (*see* Index) was reduced in 1948 to one year to assist more readily immigrant families. It was not considered practicable to reduce the residence requirement

further but in April 1956 the Department of Citizenship and Immigration undertook as an alternative measure to provide assistance to immigrant families during their first year in Canada at the rate of \$60 a year for each child under 16 years of age not born in Canada. Unemployment insurance under the Unemployment Insurance Act of 1941 (*see Index*) provides cash payment to natives and immigrants alike if they have fulfilled the conditions of the Act. Old Age Security and Old Age Assistance (*see Index*) both require twenty years of residence in the country, which may affect especially dependent parents who may have come to Canada on the sponsorship of their adult children. A ten-year residence requirement applies in the case of Pensions for the Blind (*see Index*) and Disabled Persons Allowances (*see Index*) though such persons are eligible from age 18 on. Conditions for the payment of Workmen's Compensation are the same for immigrants and citizens.

This article has attempted to review selected aspects of Canadian immigration development and to place in perspective the changing immigration and conditions of immigration into Canada since the early days of colonization. It is planned to deal with complementary aspects and with immigration in its social character in subsequent editions of the Year Book.

Section 1.—Immigration Statistics

The numbers of immigrant arrivals in Canada year by year from 1912 to 1956 are shown in Table 1. Tables 2 to 8 provide statistical analyses of the content of the immigration movement in recent years. The numbers of persons refused admission at ports of entry and those deported from Canada during 1952 to 1956 are given in Table 9.

During the period 1912 to 1956, 4,217,838 immigrants were admitted to Canada. The annual influx ranged from a high of 400,870 in 1913 to a low of 7,576 in 1942, the average yearly intake for the period being 95,860. The total number of immigrant arrivals in the postwar period 1946 to 1956 was 1,387,176, representing an average of 126,107 a year.

1.—Immigrant Arrivals 1912-56

NOTE.—Figures for 1852-93 are given in the 1942 Year Book, p. 153 and for 1894-1911 in the 1948-49 edition, p. 175.

Year	Arrivals	Year	Arrivals	Year	Arrivals	Year	Arrivals	Year	Arrivals
	No.		No.		No.		No.		No.
1912.....	375,756	1921.....	91,728	1930.....	104,806	1939.....	16,994	1948.....	125,414
1913.....	400,870	1922.....	64,224	1931.....	27,530	1940.....	11,324	1949.....	95,217
1914.....	150,484	1923.....	133,729	1932.....	20,591	1941.....	9,329	1950.....	73,912
1915.....	36,665	1924.....	124,164	1933.....	14,382	1942.....	7,576	1951.....	194,391
1916.....	55,914	1925.....	84,907	1934.....	12,476	1943.....	8,504	1952.....	164,498
1917.....	72,910	1926.....	135,982	1935.....	11,277	1944.....	12,801	1953.....	168,868
1918.....	41,845	1927.....	158,886	1936.....	11,643	1945.....	22,722	1954.....	154,227
1919.....	107,698	1928.....	166,783	1937.....	15,101	1946.....	71,719	1955.....	109,946
1920.....	138,824	1929.....	164,993	1938.....	17,244	1947.....	64,127	1956.....	164,857

It will be seen from the figures of Table 2 that during the five-year period 1952 to 1956, 29.1 p.c. of the immigration flow came from the United Kingdom and Ireland, 57.7 p.c. from Continental Europe, 6.5 p.c. from the United States and 6.7 p.c. from all other countries.

2.—Immigrant Admissions by Country of Last Permanent Residence 1952-56

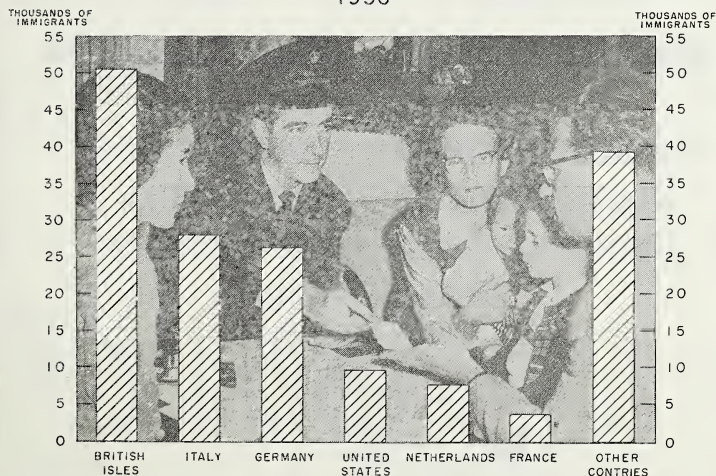
NOTE.—Comparable figures for 1946-49 are given in the 1951 Year Book, p. 143 and for 1950 and 1951 in the 1956 edition, p. 182; figures in less detail for 1939-45 appear in the 1950 edition, p. 186.

Country	1952	1953	1954	1955	1956
	No.	No.	No.	No.	No.
British Isles—					
England.....	31,776	31,929	29,618	21,813	36,422
Northern Ireland.....	2,671	4,255	2,889	1,397	2,967
Scotland.....	10,025	9,683	9,919	5,472	10,055
Wales.....	588	707	694	546	802
Totals, British Isles.....	45,060	46,574	43,120	29,228	50,246
Other Commonwealth.....	3,473	4,238	5,031	4,702	5,335
Totals, Commonwealth.....	48,533	50,812	48,151	33,930	55,581
Republic of Ireland.....	947	2,121	2,059	1,038	2,229
Continental Europe—					
Czechoslovakia.....	514	27	16	30	30
France.....	5,395	4,045	3,672	2,869	3,809
Germany.....	25,716	34,193	28,479	17,630	26,061
Italy.....	20,651	23,704	23,780	19,139	27,939
Netherlands.....	21,068	20,341	16,182	6,759	7,792
Poland.....	3,358	136	45	113	186
Union of Soviet Socialist Republics ¹	1,969	69	24	4	14
Other European countries.....	19,253	17,750	17,144	13,394	26,699
United States ²	9,333	9,407	10,131	10,395	9,777
Other countries.....	7,761	6,263	4,544	4,645	4,740
Totals, All Countries.....	164,498	168,868	154,227	109,946	161,857

¹ In both Europe and Asia.

² Includes U.S.A. citizens on permit but applying for permanent residence.

IMMIGRANT ADMISSIONS BY COUNTRY OF LAST PERMANENT RESIDENCE 1956

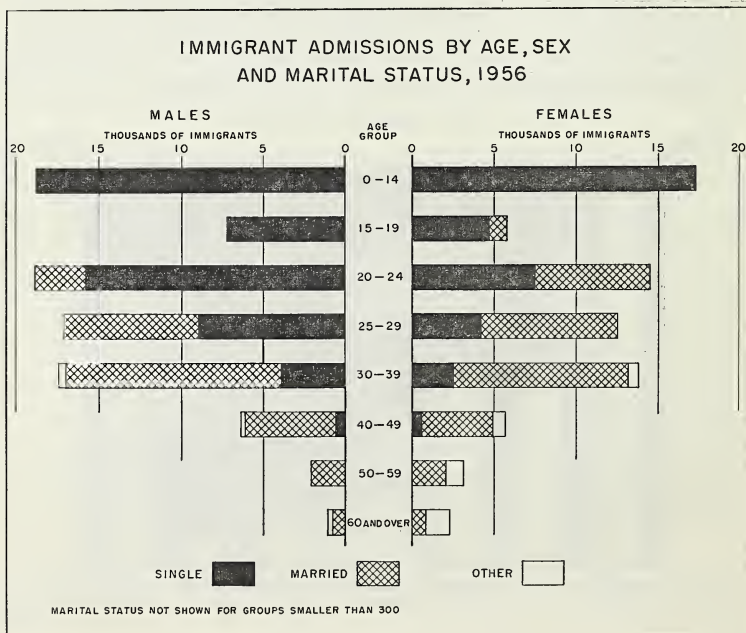


Sex, Age and Marital Status.—In the ten-year period 1947 to 1956 adult males comprised 42.2 p.c. of the immigrant arrivals, adult females 33.3 p.c. and children under 18 years of age the remaining 24.5 p.c. Without relation to age, 54.3 p.c. of the newcomers were males.

3.—Sex Distribution of Immigrants as Adult Males, Adult Females and Children, 1947-56

NOTE.—Figures from 1930 are given in the corresponding table of previous Year Books beginning with the 1946 edition.

Year	Adult Males	Adult Females	Under 18 Years		Total
			Males	Females	
	No.	No.	No.	No.	No.
1947.....	27,281	24,787	6,154	5,905	64,127
1948.....	52,986	45,191	14,104	13,133	125,414
1949.....	39,044	32,957	12,118	11,098	95,217
1950.....	30,700	24,172	10,287	8,753	73,912
1951.....	95,818	53,239	24,348	20,986	194,391
1952.....	66,083	53,443	23,766	21,206	164,498
1953.....	68,269	56,425	23,153	21,021	168,868
1954.....	64,551	51,690	19,980	18,006	154,227
1955.....	42,425	40,120	14,403	12,998	109,946
1956.....	67,880	55,574	21,661	19,742	164,857



In 1956, 78.9 p.c. of the males and 77.0 p.c. of the females arriving were 15 years of age or over as compared with 78.3 p.c. and 78.7 p.c., respectively in 1955. Of those arriving in 1956 who were 15 years of age or over, 51.8 p.c. were married, 44.0 p.c. were single and 4.1 p.c. were widowed or divorced. The total number of single males exceeded the number of single females by 18,317 but there were more females than males in the married, widowed and divorced categories. In the single class, males were 49.1 p.c. more numerous than females, the numerical superiority being particularly heavy in the age group 15 to 29.

4.—Sex and Marital Status of Immigrant Arrivals by Age Group 1955 and 1956

Year and Age Group	Males					Females				
	Single	Married	Wid- owed	Di- vorced	Total	Single	Married	Wid- owed	Di- vorced	Total
1955	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
0 - 14 years.....	12,334	—	—	—	12,334	11,292	—	—	—	11,292
15 - 19 ".....	4,456	46	—	—	4,502	3,252	698	—	2	3,952
20 - 24 ".....	9,104	1,606	2	8	10,720	5,110	4,639	1	32	9,782
25 - 29 ".....	6,359	4,810	11	63	11,243	3,373	5,783	29	99	9,284
30 - 39 ".....	2,759	7,874	39	159	10,831	2,141	7,149	122	250	9,662
40 - 49 ".....	546	3,829	50	122	4,547	570	3,429	331	258	4,588
50 - 59 ".....	120	1,405	72	59	1,656	205	1,542	683	158	2,588
60 years or over.....	52	701	228	14	995	166	603	1,149	52	1,970
Totals, 1955.....	35,730	20,271	402	425	56,828	26,109	23,843	2,315	851	53,118
1956	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
0 - 14 years.....	18,879	—	—	—	18,879	17,334	—	—	—	17,334
15 - 19 ".....	7,206	62	1	1	7,270	4,733	1,019	1	1	5,754
20 - 24 ".....	15,813	3,083	—	22	18,918	7,465	7,014	14	47	14,540
25 - 29 ".....	8,972	8,212	13	124	17,321	4,227	8,336	26	148	12,737
30 - 39 ".....	3,909	13,213	51	278	17,451	2,586	10,597	162	384	13,729
40 - 49 ".....	646	5,521	74	153	6,394	598	4,352	417	321	5,688
50 - 59 ".....	123	1,918	87	48	2,176	196	1,876	882	199	3,153
60 years or over.....	48	782	286	16	1,132	140	706	1,459	76	2,381
Totals, 1956.....	55,596	32,791	512	642	89,541	37,279	33,900	2,961	1,176	75,316

Birthplace, Nationality and Origin.—Of the immigrant arrivals in 1956, 33.5 p.c. were born in Commonwealth countries or in Ireland. This percentage compares with 30.3 p.c. in 1955, 31.2 p.c. in 1954, 29.9 p.c. in 1953 and 28.2 p.c. in 1952. In 1956, 36.4 p.c. of the newcomers were born in Germany, Italy or the Netherlands, 4.9 p.c. were born in the United States and 25.2 p.c. in other countries.

5.—Birthplaces of Immigrant Arrivals, 1954-56

NOTE.—Figures from 1942 are given in the corresponding table of previous Year Books beginning with the 1948-49 edition.

Birthplace	1954	1955	1956	Birthplace	1954	1955	1956
No.	No.	No.	No.	No.	No.	No.	No.
Commonwealth—				Commonwealth—concl.			
British Isles—				Other Commonwealth—			
England.....	25,426	18,597	31,271	Canada.....	704	669	660
Northern Ireland.....	3,182	1,549	3,142	India.....	526	538	729
Scotland.....	10,091	5,775	10,332	New Zealand.....	371	310	393
Wales.....	961	734	1,097	West Indies (British).....	799	804	1,065
Lesser Isles.....	198	118	122	Other.....	1,218	840	1,070
Totals, British Isles....	39,858	26,773	45,964	Republic of Ireland.....	2,795	1,584	3,221
Other Commonwealth—				Continent of Africa (other			
Africa (British).....	637	443	589	than British).....	186	83	488
Australia.....	1,248	1,302	1,605				

For footnotes, see end of table, p. 180.

5.—Birthplaces of Immigrant Arrivals, 1954-56—concluded

Birthplace	1954	1955	1956	Birthplace	1954	1955	1956
No.	No.	No.	No.	No.	No.	No.	No.
Continent of North America—				Continent of Europe—concl.			
Central America.....	26	25	28	Denmark.....	1,420	1,378	3,583
Mexico.....	87	72	59	Finland.....	699	642	1,099
United States.....	8,089	8,487	8,016	France.....	3,015	2,336	3,077
Other.....	96	87	78	Germany.....	24,212	15,288	23,216
				Greece.....	2,780	2,927	5,078
				Hungary.....	1,094	680	4,583
				Italy.....	24,331	19,960	29,189
				Latvia.....	525	338	346
				Lithuania.....	318	177	209
				Netherlands.....	15,823	6,655	7,627
				Norway.....	1,014	722	848
				Poland.....	3,520	2,350	2,593
				Romania.....	1,174	557	714
				Switzerland.....	1,145	739	1,243
				Union of Soviet Socialist Republics ¹	1,610	1,109	968
				Yugoslavia.....	2,416	1,916	2,803
				Other.....	1,249	1,961	2,611
				Grand Totals.....	154,227²	109,946³	164,557⁴
Continent of South America.....							
	598	506	492				
Continent of Asia—							
China.....	2,029	2,623	2,174				
Israel.....	97	99	162				
Japan.....	86	110	142				
Other.....	496	731	1,099				
Continent of Europe—							
Austria.....	4,346	1,996	3,126				
Belgium.....	1,572	1,215	2,370				
Czechoslovakia.....	1,159	663	892				

¹ In both Europe and Asia.
and 246 not stated.

² Includes 7 born at sea and 852 not stated.
⁴ Includes 3 born at sea and 645 not stated.

³ Includes 5 born at sea

Out of every hundred immigrants admitted to Canada during the three-year period 1954 to 1956, 31 were British subjects, 17 were citizens of Germany, 17 of Italy, 7 of the Netherlands and 6 of the United States; other nationalities made up the remaining 22.

6.—Nationalities of Immigrant Arrivals 1954-56

NOTE.—Figures from 1930 are given in the corresponding table of previous Year Books beginning with the 1936 edition.

Nationality	1954	1955	1956	Nationality	1954	1955	1956
No.	No.	No.	No.	No.	No.	No.	No.
African (not British).....	24	—	28	Latvian.....	426	118	82
Albanian.....	23	2	—	Lithuanian.....	192	55	50
Argentinian.....	70	156	103	Mexican.....	53	65	49
Armenian.....	2	—	—	Netherlander.....	16,817	6,885	7,896
Austrian.....	4,597	1,997	3,193	Norwegian.....	998	686	838
Belgian.....	1,448	1,027	2,226	Persian.....	6	12	6
Brazilian.....	18	60	60	Polish.....	1,846	169	267
British.....	46,725	32,370	53,362	Portuguese.....	1,072	1,212	1,729
Bulgarian.....	40	4	11	Romanian.....	395	17	22
Central American.....	15	20	17	Russian.....	294	26	27
Chinese.....	1,930	2,535	2,044	South American, <i>n.e.s.</i>	94	134	147
Czechoslovakian.....	229	36	30	Spanish.....	124	146	359
Danish.....	1,417	1,379	3,605	Swedish.....	329	278	416
Estonian.....	232	46	30	Swiss.....	1,141	728	1,215
Finnish.....	677	628	1,074	Syrian.....	116	360	466
French.....	3,016	2,332	3,427	Turkish.....	34	22	48
German.....	28,360	17,138	25,590	Ukrainian.....	245	—	—
Greek.....	2,857	2,907	5,104	United States.....	9,174	9,597	9,038
Hungarian.....	391	139	3,914	West Indian (not British)....	19	23	33
Icelandic.....	36	19	48	Yugoslavic.....	1,764	394	460
Irish (Republic of Ireland)...	2,334	1,261	2,664	Other.....	233	4,511	5,190
Israeli.....	432	276	346				
Italian.....	24,410	20,077	29,522				
Japanese.....	72	99	121	Totals.....	154,227	109,946	164,557

Immigrants of continental European origin comprised 63.1 p.c. of the influx during 1956, those of British origin 34.3 p.c. and of other origins 2.6 p.c. These percentages remained fairly constant during the three years 1954 to 1956.

7.—Origins of Immigrant Arrivals 1954-56

NOTE.—Figures from 1926 are given in the corresponding table of previous Year Books beginning with the 1939 edition.

Origin	1954	1955	1956	Origin	1954	1955	1956
No.	No.	No.	No.	No.	No.	No.	No.
British—				Continental European—			
English.....	29,617	22,422	35,204	concl.			
Irish.....	7,748	4,910	8,242	Scandinavian—			
Scottish.....	11,534	7,289	11,987	Danish.....	1,499	1,496	3,713
Welsh.....	1,075	846	1,154	Icelandic.....	50	25	41
Totals, British.....	49,974	35,467	56,587	Norwegian.....	1,181	898	1,011
				Swedish.....	510	488	596
Continental European—				Spanish ¹	247	335	571
Albanian.....	26	21	6	Swiss ²	1,027	680	1,115
Austrian.....	3,877	1,835	2,982	Ukrainian.....	724	560	578
Belgian.....	1,346	1,015	2,143	Yugoslavic ¹	1,610	1,416	2,043
Bulgarian.....	48	41	33	Totals, Continental			
Czech.....	377	354	347	European.....	101,351	70,460	104,011
Estonian.....	294	194	166				
Finnish.....	717	652	1,128	Other—			
French.....	3,489	2,941	3,768	Arabian.....	15	56	87
German.....	31,106	19,625	27,843	Armenian.....	76	144	189
Greek.....	2,956	3,057	5,274	Chinese.....	1,958	2,602	2,103
Italian.....	24,857	20,545	30,064	East Indian.....	177	249	332
Jewish.....	2,036	1,660	2,190	Indian (American).....	20	28	31
Lettish.....	470	356	342	Japanese.....	73	102	124
Lithuanian.....	279	191	216	Mexican.....	11	11	27
Magyar.....	562	478	4,340	Negro.....	254	414	572
Maltese.....	939	355	381	Persian.....	11	15	11
Netherlander.....	16,691	7,328	8,257	Syrian.....	253	326	494
Polish.....	2,461	2,073	2,438	Turkish.....	26	20	56
Portuguese.....	1,337	1,439	1,984	Not stated.....	28	52	233
Romanian.....	230	105	153	Totals, Other.....	2,902	4,019	4,259
Russian.....	405	297	288	Grand Totals.....	154,227	109,946	164,857

¹ Includes a few minor groups.
such as German, French, Italian, etc.

² Reported as Swiss origin but evidently one of the constituent races

Destination and Occupation.—Approximately 55 p.c. of the immigrants admitted to Canada in 1956 declared that they were destined to occupations in the labour force. The other 45 p.c. were wives, children, other dependants and retired persons. Of the workers, 11.4 p.c. were classed as professional and managerial, 8.2 p.c. were entering agricultural occupations, 15.2 p.c. were in service occupations, 32.1 p.c. were in manufacturing, mechanical and construction trades, and 13.7 p.c. were general labourers. Almost half of the gainfully occupied female immigrants were in service occupations.

Ontario absorbed 55.0 p.c. of the arrivals in 1956, Quebec 19.0 p.c., British Columbia and the Prairie Provinces 21.8 p.c. and the Atlantic Provinces 1.8 p.c. Destinations of 2.4 p.c. were not specified.

8.—Intended Destination and Occupation of Immigrants Admitted to Canada 1956

No.	Intended Occupation	Intended Destination											
		Nfld.		P.E.I.		N.S.		N.B.		Que.		Ont.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1	Managerial (owners, managers, officials).....	6	1	—	—	11	—	8	—	222	11	439	21
	Professional	61	39	6	—	71	37	58	26	1,571	504	3,341	1,417
2	Accountants and auditors.....	4	—	—	—	4	—	1	—	115	8	198	10
3	Architects.....	—	—	—	—	1	—	1	—	38	2	100	3
4	Chemists (other than pharmacists).....	—	—	—	—	2	1	1	—	65	4	142	5
5	Dentists.....	1	—	—	—	—	—	1	—	2	1	16	1
6	Draftsmen and designers.....	1	—	—	—	—	—	—	—	313	17	745	32
7	Aeronautical engineers.....	—	—	—	—	—	—	—	—	40	—	79	—
8	Chemical engineers.....	1	—	—	—	—	—	—	—	31	—	38	—
9	Civil engineers (and other prof. engineers, <i>n.e.s.</i>).....	—	—	—	—	3	—	4	—	151	—	266	—
10	Forestry engineers.....	—	—	—	—	—	—	—	—	2	—	1	—
11	Electrical engineers.....	2	—	—	—	7	—	—	—	150	1	247	—
12	Mechanical engineers.....	2	—	—	—	—	—	3	—	95	—	208	—
13	Metallurgical engineers.....	—	—	—	—	—	—	—	—	4	—	5	—
14	Mining engineers.....	—	—	—	—	—	—	—	—	13	—	24	—
15	Laboratory technicians and assistants, <i>n.e.s.</i>	1	1	—	—	3	1	3	—	59	29	142	71
16	Graduate nurses.....	—	21	—	—	—	15	—	11	—	173	—	775
17	Physicians and surgeons.....	36	2	—	—	13	2	2	2	56	16	128	15
18	Teachers and professors.....	3	2	—	—	14	10	10	7	71	110	197	272
19	Other professional workers.....	10	4	6	—	24	8	32	6	366	143	805	233
	Clerical	5	8	2	1	17	49	10	13	795	1,120	1,969	3,757
20	Stenographers and typists.....	—	3	—	1	—	29	—	6	18	738	39	2,301
21	Other clerical workers.....	5	5	2	—	17	20	10	7	777	382	1,930	1,456
	Transportation	7	—	—	—	19	—	12	—	289	3	793	4
22	Air pilots, captains and mates, railway conductors, locomotive engineers, etc.....	2	—	—	—	8	—	3	—	44	—	67	—
23	Other transportation workers.....	5	—	—	—	11	—	9	—	245	3	726	4
24	Communication workers	1	—	—	—	7	2	1	—	76	34	148	220
	Commercial	5	2	1	—	16	4	13	4	472	169	1,514	638
25	Commercial travellers and salesmen.....	2	—	1	—	9	—	9	—	295	9	1,056	38
26	Sales clerks.....	1	2	—	—	5	4	2	2	73	148	202	546
27	Other trading workers.....	2	—	—	—	2	—	2	2	104	12	256	54
28	Financial workers	1	—	—	—	2	—	1	—	62	2	136	4
	Service	16	8	3	9	61	139	14	29	989	3,170	1,606	5,038
29	Barbers, hairdressers, manicurists.....	—	—	—	1	3	3	1	1	95	62	250	203
30	Nurses' aids.....	3	1	—	1	—	14	—	—	21	163	85	305
31	Cooks.....	1	—	1	—	12	1	2	—	185	41	207	93
32	Domestic servants.....	—	4	—	6	—	107	—	25	32	2,739	38	4,175
33	Other non-professional service workers.....	12	3	2	1	46	5	11	3	656	165	1,026	262
	Agricultural	3	—	25	—	129	1	50	—	1,300	12	3,692	51
34	Farmers and agriculturists.....	—	—	—	—	4	—	—	—	13	—	46	—
35	Farm labourers.....	3	—	25	—	125	1	50	—	1,287	12	3,646	51
	Fishing, Trapping and Logging	1	—	—	—	10	—	4	—	47	—	256	—
36	Fishermen.....	1	—	—	—	8	—	—	—	1	—	5	—
37	Trappers.....	—	—	—	—	—	—	—	—	—	—	1	—
38	Bushmen and lumbermen.....	—	—	—	—	2	—	4	—	46	—	250	—
	Mining	—	—	—	—	1	—	2	—	161	—	661	—
39	Miners.....	—	—	—	—	1	—	2	—	157	—	648	—
40	Oil field workers.....	—	—	—	—	—	—	—	—	3	—	14	—
41	Other workers in mines, quarries.....	—	—	—	—	—	—	—	—	1	—	2	—
	Manufacturing, Mechanical and Construction	36	5	4	—	238	5	149	12	4,518	375	14,998	1,153
42	Aircraft mechanics and repairmen.....	2	—	—	—	4	—	1	—	35	—	159	—
43	Automobile mechanics and repairmen.....	3	—	—	—	18	—	14	—	302	—	883	—
44	Bakers.....	—	—	—	—	6	—	6	—	149	2	413	6
45	Blacksmiths, hammermen, forgers.....	—	—	—	—	—	—	—	—	36	—	102	—
46	Boilermakers, platers.....	—	—	—	—	—	—	—	—	7	—	29	—
47	Brick and stone masons.....	2	—	1	—	14	—	29	—	419	—	1,389	—
48	Butchers and meat cutters.....	—	—	—	—	4	—	3	—	106	1	321	1
49	Butter and cheese makers.....	—	—	—	—	1	—	—	—	3	—	11	1
50	Cabinet and furniture makers.....	1	—	—	—	4	—	3	—	91	—	264	—

8.—Intended Destination and Occupation of Immigrants Admitted to Canada 1956—cont.

Intended Destination														Canada			No.
Man.		Sask.		Alta.		B.C.		Yukon and N.W.T.		Not Specified		M.	F.	Total			
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.						
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.			
20	—	13	3	82	2	149	5	2	1	—	—	952	44	996	1		
136	97	116	55	445	135	682	317	4	—	196	38	6,687	2,656	9,343	2		
8	1	—	—	18	—	63	3	—	—	4	—	416	22	438	3		
4	—	5	—	12	1	32	1	—	—	11	—	204	7	211	4		
1	—	3	—	12	1	12	—	—	—	13	1	251	12	263	5		
1	—	1	—	—	—	2	—	—	—	5	—	29	2	31	6		
14	1	3	—	37	2	55	9	—	—	17	7	1,185	68	1,253	7		
6	—	—	—	1	—	6	—	1	—	—	—	133	—	133	8		
—	—	—	—	3	—	12	—	—	—	8	—	93	—	93	9		
4	—	6	—	26	—	63	—	—	—	13	—	536	—	536	10		
—	—	1	—	—	—	3	—	—	—	1	—	8	—	8	11		
5	—	2	—	18	—	24	—	—	—	4	—	459	1	460	12		
4	—	2	—	15	—	28	—	—	—	18	1	375	1	376	13		
—	—	1	—	1	—	4	—	—	—	—	—	15	—	15	14		
—	—	3	—	15	—	5	—	—	—	4	—	64	—	64	15		
6	2	2	1	13	4	23	13	—	—	17	2	269	124	393	16		
—	51	—	19	—	65	—	114	—	—	—	4	—	1,248	1,248	17		
26	3	26	3	23	2	26	2	—	—	28	4	364	51	415	18		
8	20	14	13	26	28	112	100	—	—	6	5	461	567	1,028	19		
49	19	46	19	225	32	212	75	3	—	47	14	1,825	553	2,378	20		
93	120	25	50	154	168	398	627	2	4	48	57	3,518	5,974	9,492	21		
1	60	—	32	4	97	4	386	—	1	—	26	66	3,680	3,746	22		
92	60	25	18	150	71	394	241	2	3	48	31	3,452	2,294	5,746	23		
96	1	14	—	97	—	205	—	3	—	99	4	1,634	12	1,646	24		
6	—	—	—	5	—	40	—	3	—	1	—	179	—	179	25		
90	1	14	—	92	—	165	—	—	—	98	4	1,455	12	1,467	26		
7	9	1	2	18	12	31	37	—	—	2	1	292	317	609	27		
75	32	11	8	123	39	310	93	2	—	25	5	2,567	994	3,561	28		
44	—	8	—	84	—	189	5	1	—	6	—	1,704	52	1,756	29		
25	27	2	6	20	36	60	85	—	—	10	3	400	859	1,259	30		
6	5	1	2	19	3	61	3	1	—	9	2	463	83	546	31		
5	—	3	—	12	2	30	2	—	—	—	—	252	10	262	32		
119	308	74	119	171	470	378	783	2	7	55	241	3,488	10,312	13,800	33		
11	13	3	2	15	16	26	30	—	1	17	6	421	338	759	34		
6	14	2	5	6	39	18	65	—	—	—	16	141	623	764	35		
43	3	15	1	39	17	57	18	1	—	8	8	571	182	753	36		
9	266	1	103	8	371	15	603	—	5	—	197	103	8,601	8,704	37		
50	12	53	8	103	27	262	67	1	1	30	14	2,252	568	2,820	38		
360	6	148	2	755	20	824	10	1	—	110	1	7,397	103	7,500	39		
3	—	3	—	16	—	41	—	—	—	—	—	126	—	126	40		
357	6	145	2	739	20	783	10	1	—	110	1	7,271	103	7,374	41		
10	—	2	—	10	—	164	—	—	—	1	—	505	—	505	42		
—	—	—	—	1	—	7	—	—	—	—	—	23	—	23	43		
—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	44		
10	—	2	—	9	—	157	—	—	—	1	—	481	—	481	45		
51	—	10	—	73	—	103	—	8	—	69	2	1,142	2	1,144	46		
50	—	6	—	48	—	100	—	8	—	67	1	1,087	1	1,088	47		
1	—	4	—	25	—	2	—	—	—	2	—	51	—	51	48		
—	—	—	—	—	—	1	—	—	—	—	1	4	1	5	49		
1,189	62	376	14	1,656	64	3,004	122	8	1	1,156	119	27,332	1,932	29,264	50		
7	—	2	—	4	—	11	—	—	—	11	—	236	—	236	51		
66	—	28	—	95	—	196	—	—	—	135	1	1,740	1	1,741	52		
49	—	20	—	65	—	82	1	—	—	16	—	806	9	815	53		
12	—	2	—	16	—	22	—	—	—	8	—	198	—	198	54		
2	—	—	—	5	—	19	—	—	—	1	—	63	—	63	55		
122	—	64	—	183	—	310	—	—	—	34	—	2,567	—	2,567	56		
36	—	11	—	49	—	48	—	—	—	16	2	594	4	598	57		
1	—	—	—	1	—	1	—	—	—	—	—	18	1	19	58		
37	—	11	—	58	—	80	—	—	—	9	—	558	—	558	59		

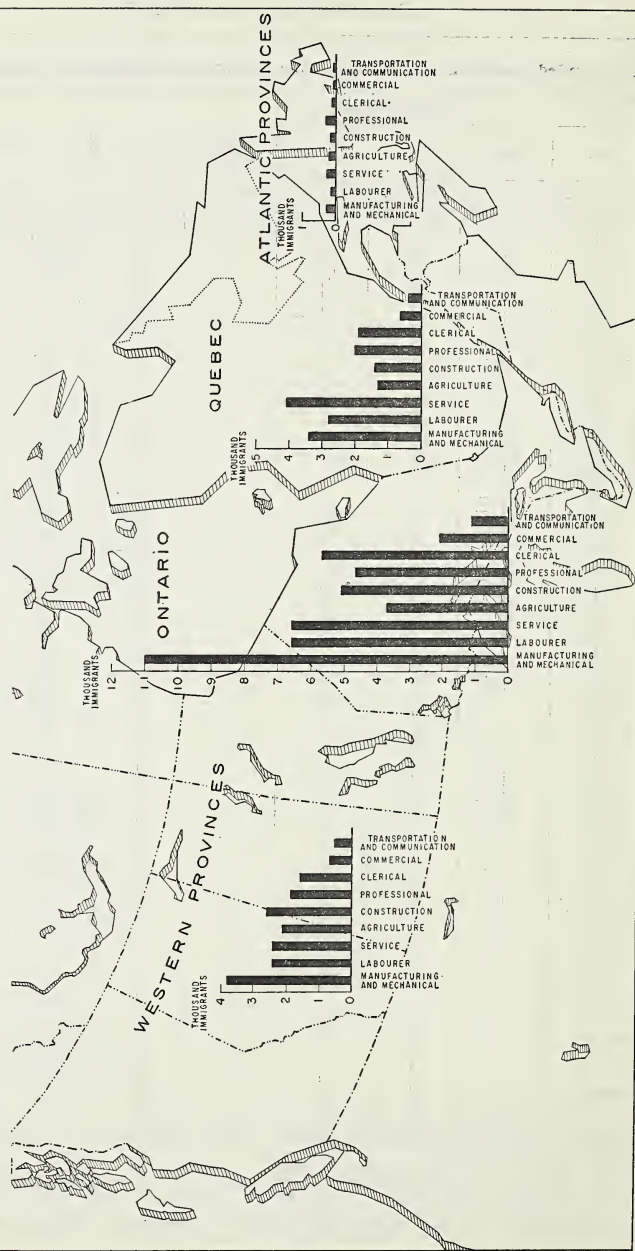
8.—Intended Destination and Occupation of Immigrants Admitted to Canada 1956—cont.

No.	Intended Occupation	Intended Destination											
		Nfld.		P.E.I.		N.S.		N.B.		Que.		Ont.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
	Manufacturing, Mechanical and Construction—concl.												
1	Carpenters.....	4	—	2	—	33	—	25	—	378	—	1,465	—
2	Compositors and typesetters.....	1	—	—	—	—	—	1	—	30	—	121	—
3	Construction and machinery operators.....	1	—	—	—	1	—	—	—	32	—	76	—
4	Coremakers.....	—	—	—	—	—	—	—	—	1	—	3	—
5	Dressmakers and seamstresses.....	—	1	—	—	—	4	—	4	8	228	13	440
6	Electricians and wiremen.....	1	—	—	—	13	—	11	—	283	—	821	—
7	Electroplaters.....	—	—	—	—	1	—	—	—	8	—	49	—
8	Furriers.....	—	—	—	—	—	—	—	—	45	4	34	3
9	Glove makers.....	—	—	—	—	—	—	—	—	—	—	3	—
10	Jewellers and watchmakers.....	—	—	—	—	3	—	—	—	61	1	96	—
11	Leather cutters.....	—	—	—	—	—	—	—	—	3	—	14	1
12	Machine operators.....	—	—	—	—	5	—	2	—	145	1	565	9
13	Machinists.....	2	—	—	—	11	—	1	—	112	—	516	10
14	Mechanics and repairmen.....	1	—	—	—	8	—	9	—	398	—	973	—
15	Metal fitters and assemblers.....	—	—	—	—	16	—	5	—	233	—	1,001	10
16	Milliners.....	—	—	—	—	—	—	—	—	1	9	1	9
17	Millwrights.....	—	—	—	—	—	—	—	—	3	—	15	—
18	Moulders.....	—	—	—	—	—	—	—	—	40	—	118	—
19	Painters, decorators, glaziers.....	2	—	—	—	8	—	6	—	168	—	667	—
20	Patternmakers.....	—	—	—	—	—	—	—	—	14	—	55	—
21	Photoengravers and lithographers.....	—	—	—	—	—	—	—	—	5	—	27	—
22	Plasterers and lathers.....	2	—	—	—	1	—	3	—	36	—	126	—
23	Plumbers and pipe fitters.....	—	—	1	—	3	—	3	—	112	—	371	—
24	Printing and pressmen and plate printers.....	—	—	—	—	1	—	1	—	26	1	123	—
25	Radio repairmen.....	3	—	—	—	10	—	1	—	78	1	177	3
26	Sawyers (wood).....	—	—	—	—	—	—	—	—	5	—	20	—
27	Sheet metal workers and tin-smiths.....	1	—	—	—	1	—	1	—	44	—	186	—
28	Shoemakers and shoe repairers.....	—	—	—	—	25	—	3	—	107	—	213	—
29	Spinners and weavers.....	—	—	—	—	1	—	—	1	4	—	56	27
30	Stationary engineers.....	1	—	—	—	—	—	—	—	24	—	124	—
31	Stonecutters and dressers.....	—	—	—	—	—	—	—	—	6	—	8	—
32	Tailors.....	1	—	—	—	4	1	1	1	163	16	306	64
33	Tanners.....	—	—	—	—	—	—	—	—	4	—	11	—
34	Toolmakers, diemakers and setters.....	—	—	—	—	2	—	2	—	75	—	523	—
35	Upholsterers.....	—	—	—	—	4	—	—	—	36	1	130	7
36	Welders and flame cutters.....	1	—	—	—	9	—	9	—	129	1	445	—
37	Other workers in food products.....	2	—	—	—	5	—	—	—	27	3	96	9
38	Other workers in rubber products.....	—	—	—	—	—	—	—	—	8	—	33	—
39	Other workers in leather and leather products.....	3	—	—	—	—	—	1	—	13	—	24	5
40	Other workers in textiles.....	—	1	—	—	—	—	—	—	34	9	76	44
41	Other workers in clothing and textile goods.....	—	3	—	—	—	—	—	—	25	44	37	175
42	Other workers in wood products.....	1	—	—	—	3	—	1	1	38	1	166	6
43	Workers in pulp, paper and paper products.....	—	—	—	—	1	—	—	—	8	—	15	3
44	Other workers in printing and publishing.....	—	—	—	—	—	—	—	—	13	4	53	22
45	Other metal workers.....	—	—	—	—	4	—	—	—	72	—	288	6
46	Other workers in non-metallic mineral products.....	—	—	—	—	—	—	1	—	19	1	107	2
47	Other manufacturing and mechanical workers.....	—	—	—	—	5	—	4	5	242	46	883	290
48	Other construction workers.....	1	—	—	—	9	—	2	—	54	—	197	—
49	Labourers (other than agricultural, fishing, logging and mining)	8	—	—	—	67	2	50	1	2,774	55	6,609	90
50	Not Stated	1	1	—	—	2	—	—	—	65	26	167	56
	Totals, Workers	151	55	41	10	651	230	372	85	13,341	5,481	36,332	12,449
	Dependants—												
51	Wives.....	—	97	—	22	—	300	—	165	—	5,304	—	17,439
52	Children.....	59	48	16	9	208	165	102	92	3,374	3,037	11,355	10,573
53	Others.....	2	14	4	10	30	55	14	22	189	670	545	1,969
	Totals, Immigration	212	214	61	51	889	750	488	364	16,904	14,492	48,232	42,430

8.—Intended Destination and Occupation of Immigrants Admitted to Canada 1956—concl.

Intended Destination												Canada			No.
Man.		Sask.		Alta.		B.C.		Yukon and N.W.T.		Not Specified					
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total	
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
126	—	45	—	237	—	451	—	1	—	54	—	2,821	—	2,821	1
8	—	2	—	3	—	19	—	—	—	5	—	190	—	190	2
6	—	5	—	24	—	25	—	3	—	6	—	179	—	179	3
4	35	—	6	1	28	5	63	—	—	2	34	33	843	876	4
62	—	20	—	87	—	165	—	1	—	101	—	1,565	—	1,565	5
—	—	—	—	—	—	12	—	—	—	—	—	70	—	70	6
10	1	1	—	—	1	4	2	—	—	9	1	103	12	115	7
7	—	1	—	10	—	1	—	—	—	—	1	4	1	5	8
—	—	—	—	1	—	18	1	—	—	6	2	202	4	206	9
33	1	4	—	39	1	64	—	—	—	—	—	19	1	20	10
39	—	6	—	50	1	85	2	—	—	105	2	962	14	976	11
72	—	30	—	117	—	187	—	1	—	42	—	864	14	878	12
55	—	11	—	78	—	161	—	1	—	146	—	1,942	—	1,942	13
—	—	—	—	—	—	1	2	—	—	93	2	1,654	12	1,666	14
—	—	—	—	—	—	—	—	—	—	—	4	3	24	27	15
6	—	—	—	1	—	4	—	—	—	2	—	25	—	25	16
66	—	23	—	84	—	158	—	—	—	5	—	182	—	182	17
3	—	—	—	5	—	3	—	—	—	24	—	1,206	—	1,206	18
3	—	—	—	1	—	3	—	—	—	1	—	81	—	81	19
8	—	4	—	14	—	21	—	—	—	—	—	39	—	39	20
52	—	11	—	68	—	104	—	1	—	2	—	217	—	217	21
9	—	1	—	3	—	11	—	—	—	26	—	752	—	752	22
8	—	1	—	6	—	29	—	—	—	—	—	—	—	—	23
1	—	2	—	1	—	15	—	—	—	5	—	180	1	181	24
12	—	—	—	15	—	24	—	—	—	12	—	325	4	329	25
22	—	8	—	18	—	45	—	—	—	—	—	44	—	44	26
2	—	—	—	2	2	5	1	—	—	4	—	290	—	290	27
5	—	1	—	12	—	25	—	—	—	15	—	456	—	456	28
—	4	5	4	10	6	38	6	—	—	7	10	77	41	118	29
41	—	—	—	—	—	1	—	—	—	4	—	196	—	196	30
3	—	—	—	4	—	—	—	—	—	1	—	16	—	16	31
14	—	6	—	17	—	49	—	—	—	40	2	609	104	713	32
10	—	3	—	24	—	13	—	—	—	1	—	23	—	23	33
46	—	15	—	78	—	108	—	—	—	30	—	718	—	718	34
17	—	1	—	12	—	16	—	—	—	8	1	228	9	237	35
—	—	1	—	1	—	2	—	—	—	28	1	868	2	870	36
3	1	1	—	2	2	3	1	—	—	7	1	183	13	196	37
5	—	3	—	4	5	9	4	—	—	—	—	45	—	45	38
7	10	—	1	5	5	1	15	—	—	5	3	55	12	67	39
14	—	2	—	9	—	55	—	—	—	19	17	150	80	230	40
2	—	—	—	2	—	15	—	—	—	6	9	81	262	343	41
6	2	2	—	2	1	8	3	—	1	7	—	296	8	304	42
18	—	3	—	11	—	42	1	—	—	—	—	—	—	—	—
9	—	3	—	32	2	24	1	—	—	4	3	88	36	124	44
31	8	8	3	59	10	136	19	—	—	22	—	460	7	467	45
12	—	7	—	30	—	57	—	—	—	6	3	201	9	210	46
—	—	—	—	—	—	—	—	—	—	57	20	1,425	401	1,826	47
—	—	—	—	—	—	—	—	—	—	9	—	378	—	378	48
433	10	142	1	650	4	1,146	20	6	—	407	7	12,292	190	12,482	49
11	3	3	1	14	12	33	12	—	1	23	4	319	116	435	50
2,605	648	938	255	4,260	928	7,457	2,028	38	14	2,191	479	68,377	22,662	91,039	
—	984	—	430	—	1,894	—	3,361	—	27	—	524	—	30,547	30,547	51
728	681	277	222	1,355	2,257	2,031	522	17	14	347	281	20,095	18,366	38,461	52
21	129	19	61	56	260	156	—	—	8	33	21	1,069	3,741	4,810	53
3,354	2,442	1,234	968	5,671	4,288	9,870	7,942	55	63	2,571	1,312	89,541	75,316	164,857	

INTENDED DESTINATIONS AND OCCUPATIONS OF IMMIGRANTS ADMITTED TO CANADA, 1956



Deportations.—Persons unable to meet the requirements of the Immigration Act and Regulations may be refused admission to Canada upon applying at ports of entry. Certain classes not considered suited to the Canadian way of life may be deported (*see pp. 170-176*).

9.—Refusals and Deportations by Cause and Nationality 1954-56

NOTE.—Figures from 1903 are given in the corresponding table of previous Year Books.

Cause and Nationality	Refusals			Cause and Nationality	Deportations After Admission ¹		
	1954	1955	1956		1954	1955	1956
	No.	No.	No.		No.	No.	No.
From Overseas—							
CAUSE				CAUSE			
Mental and medical.....	41	60	11	Mental and medical.....	74	125	91
Civil.....	283	123	103	Public charges.....	2	23	21
				Criminality.....	210	192	164
NATIONALITY				Misrepresentation and stealth.....	249	282	249
British.....	100	119	82	Other causes.....	118	81	79
Other.....	224	64	32				
				NATIONALITY			
Totals from Overseas.....	324	183	114	British.....	249	227	212
From United States.....	1,821	1,751	1,333	United States.....	88	124	123
				Other.....	316	352	269
Grand Totals, Refusals.....	2,145	1,934	1,467	Grand Totals, Deportations.....	653	703	694

¹ Includes deserting seamen deported.

Returning Canadians.—The number of Canadians who returned to Canada during the years 1950 to 1956 after having resided in the United States were as follows: 1950, 3,518; 1951, 3,635; 1952, 4,707; 1953, 4,606; 1954, 4,516; 1955, 3,942; and 1956, 4,740.

Section 2.—Emigration Statistics

Emigration from Canada is an important factor tending to offset to some extent both present and past immigration activities. The movement to the United States of native-born Canadians as well as of Europeans who originally migrated to Canada attained considerable proportions at certain periods. The figures of Table 10, showing the numbers of persons entering the United States from Canada during the years 1947-56 were obtained from the Immigration and Naturalization Service of the United States Department of Justice. No Canadian statistics on emigration are available.

10.—Persons Entering the United States from Canada, Years Ended June 30, 1947-56

SOURCE: Immigration and Naturalization Service, United States Department of Justice.

Year	Immigrant Aliens from Canada	U.S. Citizens Returning from Canada	Persons Departed from Canada	Total
	No.	No.	No.	No.
1947.....	23,467	5,003	589	29,059
1948.....	24,788	4,946	512	30,246
1949.....	25,156	5,787	425	31,368
1950.....	21,885	3,859	476	26,220
1951.....	25,880	4,303	315	30,498
1952.....	33,354	4,012	343	37,709
1953.....	36,283	2,846	351	39,480
1954.....	34,873	2,091	734	37,698
1955.....	32,435	2,263	964	35,662
1956.....	42,363	..	..	..

¹ Newfoundland included from 1949.

PART II.—CANADIAN CITIZENSHIP*

Naturalization procedures and events leading to the passing of the Canadian Citizenship Act are given in the 1951 Year Book, pp. 153-155.

Section 1.—The Canadian Citizenship Act

The Canadian Citizenship Act came into force on Jan. 1, 1947, its purpose being to give a clear definition of Canadian citizenship and provide an underlying community of status for all the people of Canada. Since Jan. 18, 1950, the administration of Canadian citizenship has been the responsibility of the Department of Citizenship and Immigration. The provisions of the Act and its several amendments are outlined in some detail in the 1955 Year Book, pp. 177-181. More briefly, they are given in the following paragraphs.

Natural-Born Canadian Citizens, Born before Jan. 1, 1947.—The Act defines the two categories of natural-born Canadian citizens as (1) a person born in Canada or on a Canadian ship or aircraft; (2) a person born outside of Canada before Jan. 1, 1947, if the responsible parent (the father or, where the father is deceased or where the child is born out of wedlock, the mother) is a Canadian citizen, if he was, on Jan. 1, 1947, either a minor or had, prior to that date, been lawfully admitted to Canada for permanent residence and had not, before that date, acquired the citizenship or nationality of another country.

The Act provides that a person in the second category will cease to be a Canadian citizen on attaining the age of 24 years or on Jan. 1, 1954, whichever is the later date, unless he has his place of domicile in Canada at such date or has, before such date and after reaching the age of 21 years, filed a declaration of retention of Canadian citizenship.

Natural-Born Canadian Citizens, Born after Dec. 31, 1946.—A person born outside of Canada subsequent to that date, whose responsible parent is considered a Canadian citizen pursuant to the terms of the Canadian Citizenship Act, is a Canadian if his birth is registered with the Registrar of Canadian Citizenship within two years of its occurrence or within such extended period as the Minister may authorize in special cases.

The person who becomes a Canadian citizen in such manner automatically ceases to be a Canadian citizen on reaching the age of 24 years unless he complies with the requirements as set out for a person born outside of Canada before Jan. 1, 1947, who was still a minor on that date.

Canadian Citizens other than Natural Born.—Before the 1953 amendments to the Citizenship Act the only persons who acquired Canadian citizenship on Jan. 1, 1947, through the transitional clauses of Sect. 9 were persons who were naturalized in Canada before that date, British subjects who had Canadian domicile at the commencement of the Act and women lawfully admitted to Canada and married prior to Jan. 1, 1947, whose husbands would have qualified as Canadian citizens if the Act had come into force before the date of marriage. Sect. 9 was amended on June 1, 1953, so that a British subject who had his place of domicile in Canada for at least 20 years immediately before Jan. 1, 1947, need not comply with the requirements of Canadian domicile provided he was not under an order of deportation on Jan. 1, 1947.

Status of Married Women.—Since the commencement of the Canadian Citizenship Act a Canadian woman does not lose Canadian citizenship upon marriage to a non-Canadian and a non-Canadian woman does not become a Canadian citizen upon marriage to a Canadian citizen. However, a Canadian woman who marries a non-Canadian whose country of allegiance considers her to have acquired its nationality upon marriage may file a Declaration of Renunciation of Canadian citizenship if she wishes to divest herself of her Canadian citizenship. A non-Canadian woman who marries a Canadian citizen must apply to the court for a certificate of citizenship. If she is a citizen of another

* Prepared in the Canadian Citizenship Branch under the direction of Laval Fortier, Deputy Minister, Department of Citizenship and Immigration, Ottawa.

Commonwealth country she may apply direct to the Minister. The one concession as to the qualifications applicable in both instances is a residence of only one year in Canada rather than the prescribed five years of Canadian domicile.

A Canadian woman who married a non-Canadian prior to Jan. 1, 1947, and ceased to be a British subject may regain her status and be readmitted to Canadian citizenship upon application therefor, whether or not she is a resident of Canada.

Status of Minor Children.—The minor child of a Canadian citizen other than ^a natural-born Canadian may receive a certificate of Canadian citizenship upon applicationⁿ therefor by his or her responsible parent, the *de facto* guardian, or the mother if she has custody of the child. Provision is also made in the Citizenship Act for the granting of a certificate of citizenship to a minor child in special circumstances, e.g., to a child whose responsible parent is not a Canadian citizen but who has been admitted to Canada for permanent residence. Provision is made for the granting of a certificate to a person who has been adopted or legitimized and who has been admitted to Canada for permanent residence, if the adopter or the legally recognized father is a Canadian citizen.

Loss of Canadian Citizenship.—Canadian citizenship may be lost as follows:—

- (1) A Canadian citizen who when outside of Canada and not under disability (minor, lunatic or idiot) acquires by a voluntary and formal act other than marriage the nationality or citizenship of a country other than Canada. This does not apply if that country is at war with Canada at the time of acquisition but in such a case the Minister may order that he cease to be a Canadian citizen. The purpose of this is to hold the person, if deemed necessary, to his obligations as a Canadian.
- (2) A Canadian citizen who under the law of another country is a national or citizen of such country and who serves in the armed forces of such country when it is at war with Canada. This does not apply if the Canadian citizen became a national or citizen of such country when it was at war with Canada.
- (3) A Canadian citizen, other than natural born or one who has served in the Armed Forces of Canada in time of war, or other related circumstances, who resides outside of Canada for ten consecutive years without maintaining substantial connection with Canada, loses his citizenship automatically, but the period of absence may upon application be extended beyond the ten years for good and sufficient cause.

Loss of Citizenship by Revocation—Applicable Only to Naturalized Persons.—The citizenship of a Canadian citizen other than a natural-born Canadian citizen may be revoked by the Governor in Council for such reasons as trading or communicating with an enemy country during time of war; disaffection or disloyalty while out of Canada or conviction by a court of competent jurisdiction of any offence involving disaffection or disloyalty while in Canada; obtaining a certificate of naturalization or Canadian citizenship by false representation or fraud; residence outside of Canada for not less than six years (without maintenance of substantial connection) since becoming a Canadian citizen or being naturalized in Canada; residence for not less than two years (without maintenance of substantial connection) in a foreign country of which he was a national or citizen at any time prior to his becoming a Canadian citizen or being naturalized in Canada.

Loss of Citizenship by Revocation—Applicable to Both Natural-Born and Naturalized Persons.—The Governor in Council may in his discretion order that any person shall cease to be a Canadian citizen if, upon a report from the Minister of Citizenship and Immigration, he is satisfied that such person has, when not under a disability (1) acquired voluntarily the citizenship of a foreign country (other than by marriage), (2) taken or made an oath, affirmation, or other declaration of allegiance to a foreign country, or (3) made a declaration renouncing his Canadian citizenship.

Section 2.—Canadian Citizenship Statistics

Results of the 1951 Census show that 96.9 p.c. of the people of Canada were Canadian citizens; that 0.7 p.c. were citizens of other Commonwealth countries; 1.7 p.c. of European countries; 0.1 p.c. of Asiatic countries; 0.5 p.c. of the United States; and 0.1 p.c. of other countries. Table 1, classifying the 1951 population by country of allegiance and origin,

shows that 98.0 p.c. of the persons of British Isles origins and 99.7 p.c. of those of French origin owed allegiance to Canada. Corresponding percentages for other European and Asiatic origins were 89.3 p.c. and 78.7 p.c., respectively.

1.—Population by Country of Allegiance and Origin 1951

Origin	Country of Allegiance					Total
	Canada	Other Commonwealth Countries	United States	European Countries	Other Countries ¹	
	No.	No.	No.	No.	No.	No.
British Isles ²	6,577,849	95,567	34,229	1,524	516	6,709,685
French.....	4,304,972	763	8,370	4,896	166	4,319,167
Other European.....	2,279,704	6,609	22,025	229,311	16,073	2,553,722
German.....	586,597	631	8,203	21,739	2,825	619,995
Italian.....	126,767	1,640	878	22,712	248	152,245
Jewish.....	161,968	1,475	2,811	12,305	3,111	181,670
Netherlands.....	227,552	312	2,327	33,032	1,044	264,267
Polish.....	179,960	661	845	36,890	1,489	219,845
Russian.....	83,643	181	459	6,451	545	91,279
Scandinavian ³	268,904	311	4,218	9,426	165	283,024
Ukrainian.....	366,160	225	305	25,069	3,284	395,043
Other.....	278,153	1,173	1,979	61,687	3,362	346,354
Asiatic.....	57,325	417	220	104	14,761	72,827
Native Indian and Eskimo.....	165,359	45	169	17	17	165,607
Other and not stated.....	182,730	670	3,987	638	396	188,421
Totals, All Origins.....	13,567,939	104,071	69,000	236,490	31,929	14,009,429

¹ Includes persons reported as "stateless".

² Includes English, Irish, Scottish, Welsh and Manx.

³ Includes Danish, Icelandic, Norwegian and Swedish.

Citizenship Certificates Issued.—In 1956, 79,971 Canadian Citizenship Certificates were issued as compared with 73,378 in 1955. During 1956 the Canadian Citizenship Registration Branch recorded 3,868 certificates of registration of births abroad, 1,176 declarations of intention, 116 declarations of retention of Canadian citizenship, and one petition for resumption of Canadian citizenship. Certificates issued free to persons who had had active military service numbered 201. Corresponding figures for 1955 were 4,128 registrations of births abroad, 1,840 declarations of intention, 92 declarations of retention of Canadian citizenship, 12 petitions for resumption, and 144 certificates issued free to persons who had had active military service.

2.—Citizenship Certificates Issued by Status of Recipient 1954-56

Section of 1947 Act	Classification	1954	1955	1956
		No.	No.	No.
Sect. 34 (1) (i)	Certificates of Proof of Status—			
	Canadian citizens by birth.....	1,439	1,562	1,206
	By naturalization under former Acts.....	3,396	2,873	2,147
	British subjects with 5 years domicile before Jan. 1, 1947.....	1,611	1,337	1,243
	Women, through marriage.....	888	3,252	5,437
Sect. 10 (2)	British subjects with 5 years domicile after Jan. 1, 1947.....	3,092	3,252	5,023
Sect. 10 (1)	Aliens.....	13,770	48,188	42,028
Sect. 10 (5)	Minors whose parents have been granted Certificates.....	1,896	6,605	7,762
Sect. 11 (3)	Minors under special circumstances.....	90	90	101
Sect. 10 (3)	Women who regained lost Canadian citizenship through marriage.....	533	373	296
Sect. 10 (4)	Canadians who regained lost status by naturalization outside Canada.....	134	147	104
Sect. 11 (1)	Doubtful cases who now have been awarded Certificates.....	5	6	8
Sect. 11 (2)	Adopted and legitimated persons.....	31	60	88
	Replacement Certificates.....	92	943	1,078
	Miniature certificates of citizenship (issued since Oct. 18, 1955, to Canadian citizens).....	—	7,402	18,450
	Totals.....	26,977	73,378	79,971

Characteristics of Persons Granted Citizenship Certificates in 1956.—Comparable detailed statistics showing the characteristics of persons granted citizenship certificates are available since 1953; such characteristics include age, marital status, occupation, period of immigration, residence and previous nationality.

Of the total of 55,404 persons granted citizenship in 1956 only 2 p.c. had immigrated to Canada before 1921, 5 p.c. from 1921 to 1940, 64 p.c. in the period 1941 to 1950 and 29 p.c. since 1950. Regionally these new citizens were distributed as follows: 1.0 p.c. in the Atlantic Provinces, 17.2 p.c. in Quebec, 60.1 p.c. in Ontario, 12.5 p.c. in the Prairie Provinces and 8.9 p.c. in British Columbia. Just over 84 p.c. of them resided in urban centres as compared with 62 p.c. of the total population of Canada at the time of the 1951 Census.

Almost 60 p.c. of the persons naturalized during 1956 were males. Young persons under 20 years of age constituted 13 p.c. of the total, persons 20 to 44 accounted for 63 p.c., those 45 to 64 for 22 p.c. and those 65 or over for 2 p.c. Over 13 p.c. of those naturalized in 1956 formerly had been citizens of Poland. Italy had been the country of allegiance for 11 p.c., Commonwealth countries for 10 p.c. and the Netherlands for 8 p.c. Of the 8,181 who reported themselves as stateless when applying for Canadian citizenship, more than half had been born within the present boundaries of the U.S.S.R.—about 15 p.c. in Poland and 7 p.c. in each of Czechoslovakia, Hungary and Yugoslavia.

Of all the males granted citizenship certificates in 1956, 25 p.c. were employed in manufacturing and mechanical occupations, 12 p.c. were labourers in other than primary industries, 10 p.c. were employed in construction, 8 p.c. in professional occupations, 7 p.c. in service, 6 p.c. in agriculture and 5 p.c. in proprietary and managerial occupations. Of all the females granted certificates, 56 p.c. were homemakers. Among those employed outside the home, 9 p.c. were in manufacturing and mechanical occupations, 7 p.c. in clerical jobs and 6 p.c. in service occupations.

3.—Persons Granted Citizenship Certificates in 1955 and 1956 by Period of Immigration to Canada and by Province of Residence

Residence	Period of Immigration					Born in Canada ¹	Total
	Before 1921	1921-1930	1931-1940	1941-1950	1951-1955		
1955	No.	No.	No.	No.	No.	No.	No.
Residing in Canada	2,282	3,674	1,199	48,854	2,431	209	58,649
Newfoundland	3	3	6	50	13	—	75
Prince Edward Island	2	1	—	24	2	1	30
Nova Scotia	34	35	12	244	39	5	369
New Brunswick	9	17	1	69	14	5	115
Quebec	353	621	184	8,611	262	26	10,057
Ontario	598	1,342	511	30,033	1,263	77	33,824
Manitoba	200	320	104	2,943	57	22	3,646
Saskatchewan	200	267	53	627	157	11	1,315
Alberta	286	563	162	2,648	141	29	3,829
British Columbia	596	495	162	3,555	481	33	5,322
Yukon and N.W.T.	1	10	4	50	2	—	67
Residing outside Canada	1	1	—	23	7	30	62
Totals Naturalized, 1955	2,283	3,675	1,199	48,877	2,438	239	58,711
1956	No.	No.	No.	No.	No.	No.	No.
Residing in Canada	1,125	2,089	791	35,286	15,878	176	55,345
Newfoundland	1	2	1	56	40	—	100
Prince Edward Island	—	—	—	20	8	—	28
Nova Scotia	17	14	19	179	80	4	313
New Brunswick	7	6	2	63	32	2	112
Quebec	158	307	109	5,555	3,357	31	9,517
Ontario	318	803	365	21,762	10,010	67	33,325
Manitoba	78	199	51	1,904	334	13	2,579
Saskatchewan	75	152	26	549	190	12	1,004
Alberta	171	323	122	2,243	453	20	3,332
British Columbia	297	277	91	2,900	1,348	27	4,940
Yukon and N.W.T.	3	6	5	55	26	—	95
Residing outside Canada	1	—	—	15	11	32	59
Totals Naturalized, 1956	1,126	2,089	791	35,301	15,889	208	55,404

¹ Canadian born who lost their citizenship by marriage; this applies to females only.

4.—Persons Granted Citizenship Certificates in 1955 and 1956, by Age Group and Sex

Age Group	1955			1956		
	Males	Females	Total	Males	Females	Total
	No.	No.	No.	No.	No.	No.
0 - 4 Years.....	11	11	22	18	24	42
5 - 9 ".....	1,192	1,102	2,294	1,281	1,212	2,493
10 - 14 ".....	917	860	1,777	1,303	1,163	2,471
15 - 19 ".....	1,174	815	1,989	1,315	1,081	2,396
20 - 24 ".....	2,192	1,412	3,604	2,357	1,435	3,792
25 - 29 ".....	4,060	3,365	7,445	4,376	2,792	7,168
30 - 34 ".....	6,595	4,520	11,115	6,345	4,157	10,502
35 - 39 ".....	4,464	2,753	7,217	4,530	2,577	7,107
40 - 44 ".....	4,807	2,543	7,350	3,919	2,250	6,169
45 - 49 ".....	3,463	2,281	5,744	2,944	1,959	4,903
50 - 54 ".....	2,292	1,729	4,021	1,890	1,554	3,444
55 - 59 ".....	1,571	1,159	2,730	1,267	1,110	2,377
60 - 64 ".....	1,070	667	1,737	749	557	1,306
65 - 69 ".....	691	368	1,059	444	308	752
70 - 74 ".....	288	145	433	195	132	327
75+ ".....	108	66	174	93	62	155
Totals, All Ages.....	34,895	23,816	58,711	33,026	22,378	55,404

5.—Persons Granted Citizenship Certificates in 1955 and 1956, by Sex and Occupation

Occupation	1955			1956		
	Males	Females	Total	Males	Females	Total
	No.	No.	No.	No.	No.	No.
Proprietary and managerial.....	1,840	150	1,990	1,652	178	1,830
Professional.....	2,170	879	3,049	2,490	634	3,124
Clerical.....	809	1,319	2,128	1,044	1,481	2,525
Transportation and communication.....	1,166	32	1,198	1,212	34	1,246
Commercial and financial.....	1,119	389	1,508	1,088	306	1,394
Service.....	2,285	1,738	4,023	2,160	1,433	3,593
Agricultural.....	2,577	49	2,626	1,931	31	1,962
Fishing, trapping, logging.....	270	—	270	221	—	221
Mining.....	710	1	711	715	—	715
Manufacturing and mechanical.....	9,541	2,456	11,997	8,345	1,904	10,249
Construction.....	3,456	4	3,460	3,295	8	3,303
Labourers, not in primary industries.....	4,380	40	4,420	3,874	17	3,891
Homemakers.....	—	13,534	13,534	—	12,603	12,603
No occupation (including students, retired, etc.).....	802	313	1,115	628	153	781
Children under 14 years of age.....	2,099	1,945	4,044	2,450	2,253	4,703
Not stated ¹	1,671	967	2,638	1,921	1,343	3,264
Totals, All Occupations.....	34,895	23,816	58,711	33,026	22,378	55,404

¹ Mainly children over 14 years of age.

6.—Persons Granted Citizenship Certificates in 1955 and 1956, by Sex and Country of Birth

Country of Birth	1955			Country of Birth	1956		
	Males	Females	Total		Males	Females	Total
	No.	No.	No.		No.	No.	No.
Albania.....	22	—	22	Albania.....	19	2	21
Argentina.....	5	5	10	Argentina.....	8	5	13
Australia.....	27	21	48	Australia.....	33	26	59
Austria.....	761	541	1,302	Austria.....	501	472	973
Belgium.....	385	290	675	Belgium.....	331	291	622
Bermuda.....	8	4	12	Brazil.....	9	7	16
Brazil.....	15	9	24	British Guiana.....	22	13	35
British Guiana.....	25	8	33	Bulgaria.....	103	24	127
Bulgaria.....	46	22	68	Canada.....	39	295	334
Canada.....	50	370	420	Channel Islands.....	6	4	10
China.....	1,884	564	2,448	China.....	1,229	557	1,786
Cuba.....	5	5	10	Cuba.....	6	4	10
Czechoslovakia.....	1,432	1,062	2,494	Czechoslovakia.....	1,362	870	2,232
Danzig.....	6	10	16	Danzig.....	11	9	20

6.—Persons Granted Citizenship Certificates in 1955 and 1956, by Sex and Country of Birth —concluded

Country of Birth	1955			Country of Birth	1956		
	Males	Females	Total		Males	Females	Total
	No.	No.	No.		No.	No.	No.
Denmark.....	329	141	470	Denmark.....	424	192	616
Egypt.....	13	6	19	Egypt.....	18	13	31
Finland.....	174	197	371	Finland.....	160	177	337
France.....	236	152	388	France.....	362	231	593
Germany.....	859	1,163	2,022	Germany.....	1,387	1,558	2,945
Greece.....	294	197	491	Greece.....	567	253	820
Hungary.....	1,249	909	2,158	Hong Kong.....	19	13	32
Iceland.....	6	5	11	Hungary.....	1,503	1,009	2,512
India.....	64	68	132	India.....	93	57	150
Indonesia.....	7	9	16	Indonesia.....	22	15	37
Iraq.....	6	5	11	Iraq.....	11	4	15
Ireland (Republic).....	153	126	279	Ireland (Republic).....	195	116	311
Israel.....	6	8	14	Israel.....	15	19	34
Italy.....	3,440	1,147	4,587	Italy.....	4,559	1,712	6,271
Japan.....	133	122	255	Japan.....	55	85	140
Lebanon.....	32	24	56	Lebanon.....	37	37	74
Malta.....	30	4	34	Malta.....	62	16	78
Mexico.....	7	5	12	Netherlands.....	2,450	1,682	4,132
Netherlands.....	2,099	1,428	3,527	Netherlands East Indies.....	12	9	21
New Zealand.....	14	7	21	New Zealand.....	14	8	22
Norway.....	183	83	266	Norway.....	112	66	178
Palestine.....	10	4	14	Palestine.....	12	8	20
Poland.....	10,388	6,419	16,807	Poland.....	5,378	3,585	8,963
Romania.....	799	663	1,462	Romania.....	758	542	1,300
South Africa.....	16	13	29	South Africa.....	21	18	39
Spain.....	5	10	15	Spain.....	16	13	29
Sweden.....	147	72	219	Sweden.....	139	80	219
Switzerland.....	198	91	289	Switzerland.....	196	100	296
Syria.....	13	10	23	Syria.....	10	5	15
Turkey.....	16	14	30	Turkey.....	25	32	57
United Kingdom.....	1,452	1,265	2,717	United Kingdom.....	2,577	1,875	4,452
United States.....	540	253	793	United States.....	379	194	573
U.S.S.R.....	5,658	5,131	10,789	U.S.S.R.....	6,195	5,010	11,205
West Indies.....	57	50	107	West Indies.....	97	63	160
Yugoslavia.....	1,520	1,039	2,559	Yugoslavia.....	1,395	923	2,318
Other ¹	71	65	136	Other ¹	72	79	151
Totals, All Countries.....	34,895	23,816	58,711	Totals, All Countries.....	33,026	22,378	55,404
Commonwealth.....	1,756	1,826	3,582	Commonwealth.....	3,009	2,404	5,413
Other Europe.....	30,397	20,904	51,301	Other Europe.....	28,133	18,924	47,057
Other Asia.....	2,119	775	2,894	Other Asia.....	1,439	783	2,222
United States.....	540	253	793	United States.....	379	194	573
Other.....	83	58	141	Other.....	66	73	139

¹ Includes all countries for which fewer than ten former citizens were granted certificates.

7.—Persons Granted Citizenship Certificates in 1955 and 1956, by Country of Former Allegiance

Country of Former Allegiance	1955	1956	Country of Former Allegiance	1955	1956	Country of Former Allegiance	1955	1956
	No.	No.		No.	No.		No.	No.
British countries.....	3,766	5,812	Greece.....	490	810	Spain.....	17	26
Albania.....	14	19	Hungary.....	1,333	1,880	Sweden.....	195	133
Austria.....	551	600	Israel.....	23	23	Switzerland.....	294	291
Belgium.....	668	545	Italy.....	4,532	6,271	Syria.....	21	16
Brazil.....	13	11	Japan.....	265	140	Turkey.....	14	16
Bulgaria.....	36	102	Latvia.....	2,063	1,627	United States.....	983	722
China.....	2,366	1,709	Lebanon.....	50	71	U.S.S.R.....	2,434	3,204
Czechoslovakia.....	1,704	1,610	Lithuania.....	2,275	1,377	Yugoslavia.....	1,614	1,653
Denmark.....	492	628	Netherlands.....	3,564	4,199	Other countries.....	77	100
Estonia.....	1,417	1,768	Norway.....	279	179	Stateless.....	13,332	8,181
Finland.....	361	333	Palestine.....	12	15			
France.....	345	537	Poland.....	10,661	7,380			
Germany.....	1,527	2,483	Romania.....	923	933	Totals, All Countries.....	58,711	55,404

CHAPTER V.—VITAL STATISTICS*

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Vital Statistics provide a record of community and national development—a measurement of the pace of population growth, the number and distribution of people coming into the various age groups, the relative importance of each of the various causes of death, and population trends generally. This Chapter, moreover, attempts to provide a comparison of principal Canadian vital statistics rates with those of other countries and to present tables on marriages and deaths as well as detailed life tables for males and females. Births and deaths are classified by place of residence (births according to the residence of the mother) and marriages by place of occurrence.

The continuity of vital statistics provides a constant guide to the planning, operation and evaluation of a variety of national activities, notably in public health, education, community planning, and various types of business enterprise. The data are presented so as to be useful for the general reader as well as for students of demography, public health, sociology and other specialized fields. The population data upon which the rates shown in this Chapter are computed are contained in Chapter III (Population) and in the several DBS reports relating to census and intercensal estimates of population. In making both international and interprovincial comparisons of birth, death and marriage rates, it is important to note that part of the differences observed over a period of years as between different countries, provinces or local areas may be caused by differences in the sex and age distribution of the populations involved. Similarly, changes in the rates may be caused partly by changes in this distribution.

The history of the collection of vital statistics in Canada is covered in the 1948-49 edition of the Year Book, pp. 185-188. In addition to the information provided in *Vital Statistics* (Preliminary Report), *Vital Statistics of Canada* and other regular DBS annual reports, certain unpublished data are also available on request.

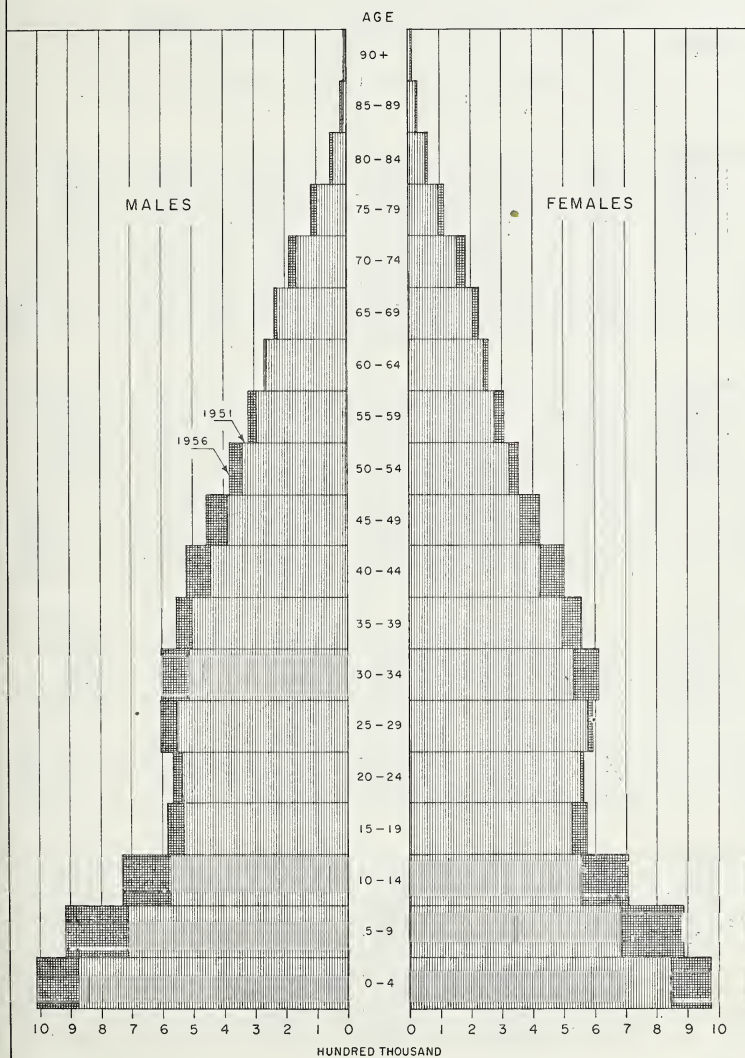
Data for the Yukon and Northwest Territories, previously shown separately and not included in the national totals, are now included in all tables unless otherwise specified.

Section 1.—Summary of Vital Statistics

Table 1 gives a summary of the principal vital statistics of the provinces of Canada from 1921 when the system of collection of national statistics was initiated and Table 2 shows certain vital statistics for urban centres having at least 10,000 population at the date of the 1951 Census.

* Revised in the Vital Statistics Section, Health and Welfare Division Dominion Bureau of Statistics.

POPULATION OF CANADA BY SEX AND FIVE-YEAR AGE GROUPS



1.—Summary of Principal Vital Statistics by Province 1921-56

Province and Year	Live Births		Deaths		Natural Increase		Infant Mortality ¹		Maternal Mortality		Marriages	
	No.	Rate ²	No.	Rate ²	No.	Rate ²	No.	Rate ³	No.	Rate ³	No.	Rate ²
Newfoundland—												
Av. 1921-25.....	6,986	26.7	3,665	14.0	3,321	12.7	..	..	50	7.1	1,481	5.7
" 1926-30.....	6,756	25.1	3,684	13.7	3,072	11.4	779	115	33	4.9	1,632	6.1
" 1931-35.....	6,686	23.4	3,642	12.8	3,044	10.6	782	117	34	5.0	1,708	6.0
" 1936-40.....	7,638	25.8	3,681	12.4	3,957	13.4	754	99	40	5.3	2,208	7.5
" 1941-45.....	9,292	29.8	3,681	11.8	5,611	18.0	852	92	39	4.2	2,967	9.5
" 1946-50.....	12,352	36.2	3,179	9.3	9,173	26.9	754	61	25	2.0	2,711	8.0
" 1951-55.....	13,101	34.1	2,926	7.6	10,175	26.5	598	46	24	1.8	2,836	7.4
1951.....	11,738	32.5	3,004	8.3	8,734	24.2	637	54	25	2.1	2,517	7.0
1952.....	12,561	33.6	2,773	7.4	9,788	26.2	572	46	25	2.0	2,730	7.3
1953.....	12,797	33.4	2,733	7.1	10,064	26.3	596	47	19	1.5	2,771	7.2
1954.....	13,653	34.6	2,916	7.4	10,737	27.2	561	41	22	1.6	2,952	7.5
1955.....	14,757	36.3	3,206	7.9	11,551	28.4	624	42	29	2.0	3,211	7.9
1956.....	14,541	35.0	3,058	7.4	11,483	27.6	630	43	23	1.6	3,073	7.4
P. E. Island—												
Av. 1921-25.....	1,965	22.6	1,085	12.5	880	10.1	152	77	9	4.6	473	5.4
" 1926-30.....	1,735	19.7	969	11.0	766	8.7	122	70	8	4.6	473	5.4
" 1931-35.....	1,961	21.1	1,001	11.1	960	10.7	131	67	10	5.1	496	5.5
" 1936-40.....	2,054	21.9	1,080	11.5	974	10.4	142	69	10	4.9	623	6.6
" 1941-45.....	2,180	23.7	964	10.5	1,216	13.2	114	52	9	3.9	686	7.5
" 1946-50.....	2,869	30.5	922	9.8	1,947	20.7	114	40	4	1.3	677	7.2
" 1951-55.....	2,720	27.2	923	9.2	1,797	18.0	88	32	2	0.8	623	6.2
1951.....	2,651	27.1	904	9.2	1,747	17.9	90	34	1	0.4	583	5.9
1952.....	2,703	27.0	916	9.2	1,787	17.8	83	31	4	1.5	613	6.1
1953.....	2,737	27.1	926	9.2	1,811	17.9	77	28	2	0.7	647	6.4
1954.....	2,724	27.0	966	9.6	1,758	17.4	95	35	2	0.7	605	6.0
1955.....	2,734	27.8	901	9.0	1,833	18.8	96	34	2	0.7	667	6.7
1956.....	2,657	26.8	933	9.4	1,724	17.4	105	40	1	0.4	649	6.6
Nova Scotia—												
Av. 1921-25.....	12,119	23.4	6,519	12.6	5,600	10.8	1,139	94	70	5.8	3,186	6.1
" 1926-30.....	11,016	21.4	6,362	12.4	4,653	9.0	934	85	61	5.5	3,224	6.3
" 1931-35.....	11,486	21.9	6,073	11.6	5,414	10.3	840	73	59	5.1	3,522	6.7
" 1936-40.....	12,060	21.7	6,126	11.0	5,934	10.7	782	65	48	4.0	4,796	8.6
" 1941-45.....	15,146	25.2	6,326	10.5	8,820	14.7	870	57	41	2.7	6,302	10.5
" 1946-50.....	17,994	28.9	6,042	9.7	11,952	19.2	760	42	22	1.2	5,525	8.9
" 1951-55.....	18,246	27.5	5,802	8.8	12,444	18.7	586	32	13	0.7	5,283	8.0
1951.....	17,125	26.6	5,812	9.0	11,313	17.6	594	35	12	0.7	5,094	7.9
1952.....	17,951	27.5	5,756	8.8	12,195	18.7	615	34	14	0.8	5,390	8.3
1953.....	18,276	27.6	5,808	8.8	12,468	18.8	585	32	14	0.8	5,378	8.1
1954.....	18,909	28.1	5,692	8.5	13,217	19.6	568	30	10	0.5	5,265	7.8
1955.....	18,967	27.8	5,940	8.7	13,027	19.1	566	30	13	0.7	5,288	7.7
1956.....	19,106	27.5	5,738	8.3	13,368	19.2	554	29	6	0.3	5,543	8.0
New Brunswick—												
Av. 1921-25.....	11,080	28.4	5,093	13.1	5,987	15.4	1,164	105	51	4.6	2,953	7.6
" 1926-30.....	10,327	25.8	5,019	12.5	5,308	13.2	1,040	101	64	6.2	2,970	7.4
" 1931-35.....	10,440	24.9	4,710	11.3	5,730	13.6	857	82	57	5.5	2,737	6.5
" 1936-40.....	11,105	25.1	5,040	11.4	6,065	13.7	913	82	54	4.9	3,801	8.6
" 1941-45.....	13,037	28.2	5,050	10.9	7,987	17.3	960	74	42	3.2	4,433	9.6
" 1946-50.....	16,878	34.0	4,886	9.8	11,992	24.2	1,015	60	23	1.4	4,864	9.8
" 1951-55.....	16,496	31.0	4,576	8.6	11,920	22.4	717	43	16	0.9	4,306	8.1
1951.....	16,075	31.2	4,873	9.4	11,202	21.8	835	52	11	0.7	4,386	8.5
1952.....	16,691	31.7	4,647	8.8	12,044	22.9	729	44	19	1.1	4,276	8.1
1953.....	16,458	30.9	4,637	8.7	11,821	22.2	734	45	16	1.0	4,232	7.9
1954.....	16,649	30.8	4,286	7.9	12,363	22.9	664	40	12	0.7	4,278	7.9
1955.....	16,609	30.4	4,435	8.1	12,174	22.3	622	37	20	1.2	4,359	8.0
1956.....	16,573	29.9	4,658	8.4	11,915	21.5	656	40	9	0.5	4,591	8.3

¹ Under one year of age.² Per 1,000 population.³ Per 1,000 live births.

1.—Summary of Principal Vital Statistics by Province 1921-56—continued

Province and Year	Live Births		Deaths		Natural Increase		Infant Mortality ¹		Maternal Mortality		Marriages	
	No.	Rate ²	No.	Rate ²	No.	Rate ²	No.	Rate ³	No.	Rate ³	No.	Rate ²
Quebec—												
Av. 1921-25.....	87,032	35.5	33,339	13.6	53,693	21.9	10,834	124	338	3.9	17,529	7.1
" 1926-30.....	82,771	30.5	36,645	13.5	46,126	17.0	10,518	127	433	5.2	18,731	6.9
" 1931-35.....	78,888	26.6	32,796	11.0	46,092	15.6	7,757	98	405	5.1	17,089	5.8
" 1936-40.....	78,509	24.6	33,221	10.4	45,288	14.2	6,470	82	400	5.1	27,111	8.5
" 1941-45.....	97,906	28.4	34,273	9.9	63,633	18.5	6,690	68	318	3.2	33,126	9.6
" 1946-50.....	115,496	30.4	33,723	8.9	81,773	21.5	6,205	54	227	2.0	34,874	9.2
" 1951-55.....	128,523	30.0	34,269	8.0	94,254	22.0	5,662	44	149	1.2	35,584	8.3
1951.....	120,930	29.8	34,900	8.6	86,030	21.2	5,821	48	180	1.5	35,704	8.8
1952.....	126,416	30.3	34,854	8.4	91,562	21.9	6,332	50	155	1.2	35,374	8.5
1953.....	128,719	30.2	34,469	8.1	94,250	22.1	5,749	45	136	1.1	35,968	8.4
1954.....	133,178	30.4	33,169	7.6	100,009	22.8	5,361	40	140	1.1	35,516	8.1
1955.....	133,372	29.5	33,952	7.5	99,420	22.0	5,046	38	133	1.0	35,356	7.8
1956.....	135,884	29.4	35,042	7.6	100,842	21.8	5,544	41	125	0.9	37,290	8.1
Ontario—												
Av. 1921-25.....	71,454	23.7	34,252	11.3	37,202	12.3	5,916	83	386	5.4	24,037	8.0
" 1926-30.....	68,704	21.0	36,650	11.2	32,054	9.8	5,091	74	398	5.8	25,449	7.8
" 1931-35.....	65,000	18.5	35,782	10.2	29,218	8.3	3,962	61	344	5.3	24,260	6.9
" 1936-40.....	64,461	17.5	37,794	10.3	26,668	7.2	3,196	50	291	4.5	32,719	8.9
" 1941-45.....	77,738	19.9	39,738	10.2	38,000	9.7	3,276	42	197	2.5	38,042	9.7
" 1946-50.....	105,161	24.6	42,214	9.9	62,947	14.7	3,795	36	129	1.2	44,084	10.3
" 1951-55.....	128,861	26.1	44,715	9.0	84,146	17.1	3,634	28	83	0.6	45,213	9.1
1951.....	114,827	25.0	43,981	9.6	70,846	15.4	3,545	31	97	0.8	45,198	9.8
1952.....	123,891	25.9	44,402	9.3	79,489	16.6	3,789	31	100	0.8	45,251	9.5
1953.....	129,771	26.3	45,242	9.2	84,529	17.1	3,696	28	69	0.5	45,954	9.3
1954.....	136,261	26.6	44,515	8.7	91,746	17.9	3,517	26	69	0.5	45,028	8.8
1955.....	139,554	26.5	45,434	8.6	94,120	17.9	3,622	26	81	0.6	44,634	8.5
1956.....	143,516	26.6	47,231	8.7	96,285	17.9	3,610	25	70	0.5	46,282	8.6
Manitoba—												
Av. 1921-25.....	16,590	26.8	5,348	8.6	11,242	18.1	1,394	84	87	5.2	4,634	7.5
" 1926-30.....	14,392	21.7	5,507	8.3	8,885	13.4	1,031	72	81	5.6	4,951	7.5
" 1931-35.....	13,690	19.4	5,413	7.7	8,277	11.7	835	61	60	4.4	5,015	7.1
" 1936-40.....	13,515	18.8	6,136	8.5	7,379	10.3	773	57	54	4.0	6,931	9.6
" 1941-45.....	15,831	21.8	6,633	9.1	9,198	12.7	814	51	41	2.6	7,295	10.0
" 1946-50.....	19,325	25.9	6,702	9.0	12,623	16.9	810	42	24	1.3	7,605	10.2
" 1951-55.....	21,321	26.4	6,775	8.4	14,546	18.0	675	32	15	0.7	7,104	8.8
1951.....	19,942	25.7	6,735	8.7	13,207	17.0	658	33	22	1.1	7,366	9.5
1952.....	20,777	26.0	6,552	8.2	14,225	17.8	647	31	11	0.5	7,128	8.9
1953.....	21,242	26.3	7,015	8.7	14,227	17.6	741	35	16	0.8	7,277	9.0
1954.....	22,248	27.0	6,719	8.2	15,529	18.8	635	29	11	0.5	6,837	8.3
1955.....	22,397	26.7	6,853	8.2	15,544	18.5	696	31	15	0.7	6,913	8.2
1956.....	21,945	25.8	7,058	8.3	14,887	17.5	676	31	6	0.3	6,709	7.9
Saskatchewan—												
Av. 1921-25.....	21,580	27.7	5,859	7.5	15,721	20.2	1,790	83	127	5.9	4,982	6.4
" 1926-30.....	21,298	24.7	6,256	7.3	15,042	17.5	1,560	73	126	5.9	5,036	7.0
" 1931-35.....	20,325	21.9	6,087	6.5	14,238	15.4	1,260	62	91	4.5	5,680	6.1
" 1936-40.....	18,075	20.4	6,366	7.0	12,310	13.4	1,025	55	68	3.6	6,599	7.2
" 1941-45.....	18,444	21.7	6,437	7.2	12,007	14.1	858	47	52	2.8	6,541	7.7
" 1946-50.....	21,907	26.3	6,473	7.8	15,434	18.5	883	40	29	1.3	7,413	8.9
" 1951-55.....	23,554	27.5	6,547	7.6	17,007	19.9	743	32	16	0.7	6,876	8.0
1951.....	21,733	26.1	6,440	7.7	15,293	18.4	676	31	22	1.0	6,805	8.2
1952.....	22,605	26.8	6,625	7.9	15,980	18.9	787	35	13	0.6	6,944	8.2
1953.....	23,703	27.5	6,687	7.8	17,016	19.7	797	34	13	0.5	7,186	8.3
1954.....	24,981	28.6	6,323	7.2	18,658	21.4	708	28	22	0.9	6,953	8.0
1955.....	24,746	28.2	6,661	7.6	18,085	20.6	745	30	11	0.4	6,494	7.4
1956.....	24,059	27.3	6,666	7.6	17,393	19.7	680	28	8	0.3	6,403	7.3

¹ Under one year of age.² Per 1,000 population.³ Per 1,000 live births.

1.—Summary of Principal Vital Statistics by Province 1921-56—concluded

Province and Year	Live Births		Deaths		Natural Increase		Infant Mortality ¹		Maternal Mortality		Marriages	
	No.	Rate ²	No.	Rate ²	No.	Rate ²	No.	Rate ³	No.	Rate ³	No.	Rate ²
Alberta—												
Av. 1921-25	15,461	26.0	4,953	8.3	10,508	17.7	1,327	86	97	6.3	4,313	7.3
" 1926-30	15,924	24.2	5,530	8.4	10,393	15.8	1,195	75	105	6.6	5,265	8.0
" 1931-35	16,557	22.1	5,447	7.3	11,110	14.8	997	60	75	4.5	5,530	7.4
" 1936-40	16,282	20.8	6,054	7.7	10,228	13.1	869	53	73	4.5	7,192	9.2
" 1941-45	18,845	23.7	6,355	8.0	12,490	15.7	827	44	46	2.4	7,977	10.0
" 1946-50	24,290	28.4	6,814	8.0	17,476	20.4	889	37	25	1.0	9,090	13.6
" 1951-55	31,087	30.6	7,527	7.4	23,560	23.2	894	29	15	0.5	9,750	9.6
1951	27,003	28.8	7,167	7.6	19,836	21.2	889	33	15	0.6	9,305	9.9
1952	29,105	29.9	7,345	7.5	21,760	22.4	879	30	15	0.5	9,514	9.8
1953	31,376	31.0	7,646	7.6	23,730	23.4	930	30	21	0.7	10,126	10.0
1954	33,593	31.8	7,520	7.1	26,073	24.7	882	26	11	0.3	9,960	9.4
1955	34,357	31.5	7,956	7.3	26,401	24.2	888	26	15	0.4	9,844	9.0
1956	34,951	31.1	7,786	6.9	27,165	24.2	860	25	14	0.4	9,965	8.9
British Columbia—												
Av. 1921-25	10,256	18.4	4,812	8.7	5,444	9.8	621	61	61	5.9	3,971	7.1
" 1926-30	10,355	16.2	5,986	9.3	4,369	6.8	571	55	63	6.1	4,786	7.5
" 1931-35	10,005	14.0	6,344	8.9	3,661	5.1	463	46	53	5.3	4,267	6.0
" 1936-40	12,106	15.6	7,697	9.9	4,408	5.7	532	44	46	3.8	7,053	9.1
" 1941-45	17,705	19.8	9,368	10.5	8,337	9.3	684	39	46	2.6	9,535	10.7
" 1946-50	25,859	24.0	10,992	10.2	14,867	13.9	868	34	31	1.2	11,564	10.7
" 1951-55	31,347	25.1	12,233	9.8	19,114	15.3	856	27	17	0.5	11,131	8.9
1951	28,077	24.1	11,638	10.0	16,439	14.1	839	30	20	0.7	11,272	9.7
1952	29,827	24.8	12,080	10.0	17,747	14.8	870	29	18	0.6	11,081	9.2
1953	31,746	25.4	12,218	9.8	19,528	15.6	859	27	18	0.6	11,298	9.1
1954	32,946	25.4	12,414	9.6	20,532	15.8	880	26	13	0.4	10,991	8.5
1955	34,138	25.4	12,816	9.5	21,322	15.9	862	25	16	0.5	11,011	8.2
1956	36,241	25.9	13,415	9.6	22,826	16.3	944	26	13	0.4	11,950	8.5
Yukon—												
1951	342	38.0	85	9.4	257	28.6	19	56	—	—	68	7.6
1952	390	43.3	94	10.4	296	32.9	19	49	—	—	73	8.1
1953	383	42.6	116	12.9	267	29.7	19	50	1	2.6	94	10.4
1954	425	42.5	85	8.5	340	34.0	25	59	—	—	110	11.0
1955	524	47.6	72	6.5	452	41.1	27	52	—	—	125	11.4
1956	481	40.1	85	7.1	396	33.0	23	48	—	—	112	9.3
Northwest Territories—												
1951	649	40.6	284	17.8	365	22.8	70	108	2	3.1	110	6.9
1952	642	40.1	341	21.3	301	18.8	86	134	2	3.1	100	6.3
1953	676	42.3	294	18.4	382	23.9	76	112	2	3.0	103	6.4
1954	631	37.1	250	14.7	381	22.4	68	108	4	6.3	134	7.9
1955	732	40.7	250	13.9	482	26.8	90	123	2	2.7	127	7.1
1956	785	41.3	291	15.3	494	26.0	117	149	3	3.8	146	7.7
Canada—⁴												
Av. 1921-25	247,538	27.4	101,269	11.2	146,277	16.2	21,337	98	1,226	5.0	66,078	7.3
" 1926-30	236,521	24.1	108,925	11.1	127,596	13.0	22,663	93	1,339	5.7	71,886	7.3
" 1931-35	228,352	21.5	103,602	9.8	124,750	11.7	17,101	75	1,153	5.0	68,594	6.5
" 1936-40	228,767	20.5	109,514	9.8	119,253	10.7	14,701	64	1,043	4.6	96,824	8.7
" 1941-45	276,832	23.5	115,144	9.8	161,688	13.7	15,093	55	791	2.9	113,936	9.7
" 1946-50	354,869	27.4	119,975	9.3	234,894	18.1	15,620	44	523	1.5	125,687	9.8
" 1951-55	416,334	28.0	126,666	8.5	289,668	19.5	14,552	35	353	0.8	128,915	8.7
1951	381,092	27.2	125,823	9.0	255,269	18.2	14,673	39	407	1.1	128,498	9.2
1952	403,559	27.9	126,585	8.7	277,174	19.2	15,408	38	376	0.9	128,474	8.9
1953	417,884	28.1	127,791	8.6	290,093	19.5	14,859	36	327	0.8	131,034	8.8
1954	436,198	28.5	124,855	8.2	311,343	20.3	13,934	32	316	0.7	128,629	8.4
1955	442,937	28.2	128,476	8.2	314,461	20.0	13,884	31	337	0.8	128,029	8.2
1956	450,739	28.0	131,961	8.2	318,778	19.8	14,399	32	278	0.6	132,713	8.3

¹ Under one year of age. ² Per 1,000 population. ³ Per 1,000 live births. ⁴ Figures for Newfoundland are included for 1949-56 only; and the Yukon and Northwest Territories 1951-56 only.

2.—Summary of Principal Vital Statistics for Urban Centres of 10,000 Population or Over¹ 1951-56

Province and Urban Centre	Births			Deaths			Natural Increase			Infant Deaths			
	Av. 1951-1955	1956		Av. 1951-1955	1956		Av. 1951-1955	1956		Av. 1951-1955	1956		
	No.	No.	Rate ²	No.	No.	Rate ²	No.	No.	Rate ²	No.	Rate ²	No.	Rate ²
Newfoundland—													
St. John's.....	1,878	2,155	37.8	507	533	9.3	1,371	1,622	28.5	75	40	63	29
Prince Edward Island—													
Charlottetown.....	477	486	29.1	206	218	13.0	271	268	16.1	14	30	24	49
Nova Scotia—													
Dartmouth.....	633	772	36.6	103	121	5.7	530	651	30.9	11	18	15	19
Glace Bay.....	687	629	25.8	220	204	8.4	467	425	17.4	32	46	27	43
Halifax.....	2,482	2,496	26.8	725	786	8.4	1,757	1,710	18.4	59	24	82	33
New Waterford.....	369	370	35.6	87	104	10.0	282	266	25.6	19	50	21	57
Sydney.....	1,063	971	30.2	246	230	7.2	817	741	23.0	24	23	9	9
Truro.....	299	392	32.0	94	122	10.0	205	270	22.0	7	23	13	33
New Brunswick—													
Edmundston.....	398	380	31.7	68	82	6.8	330	298	24.9	14	36	10	26
Fredericton.....	453	504	27.5	153	154	8.4	300	350	19.1	14	32	9	18
Moncton.....	775	861	23.9	218	250	6.9	557	611	17.0	22	29	21	24
Saint John.....	1,499	1,487	28.3	556	560	10.7	943	927	17.6	40	27	44	30
Quebec—													
Arvida.....	389	470	36.4	46	40	3.1	343	430	33.3	17	43	13	28
Cap de la Madeleine.....	680	715	31.2	127	144	6.3	553	571	24.9	23	34	33	46
Chicoutimi.....	1,041	1,075	43.2	197	186	7.5	844	889	35.7	56	54	60	56
Drummondville.....	548	808	30.7	138	191	7.3	410	617	23.4	30	55	55	68
Granby.....	854	853	31.5	176	173	6.4	678	680	25.1	28	33	20	23
Grand Mère.....	406	449	32.0	83	82	5.8	323	367	26.2	16	38	20	45
Hull.....	1,586	1,815	36.9	413	365	7.4	1,173	1,450	29.5	95	60	69	38
Jacques-Cartier.....	1,051	1,223	36.9	186	193	5.8	865	1,030	31.1	58	55	44	36
Joliette.....	470	509	30.0	164	173	10.2	306	336	19.8	19	40	27	53
Jonquière.....	943	1,033	40.4	148	133	5.2	795	900	35.2	43	46	38	37
Lachine.....	777	892	25.9	234	249	7.2	543	643	18.7	21	28	21	24
Lasalle.....	480	655	34.5	87	126	6.6	393	529	27.9	13	27	11	17
Lévis.....	338	313	22.9	118	142	10.4	220	171	12.5	19	57	15	48
Longueuil.....	391	412	28.7	106	107	7.5	285	305	21.2	16	40	8	19
Magog.....	404	391	30.7	101	89	7.0	303	302	23.7	15	36	14	36
Montreal.....	27,847	28,283	25.5	9,937	9,862	8.9	17,910	18,421	16.6	898	32	851	30
Montreal North.....	546	794	31.3	107	156	6.1	439	638	25.2	23	42	20	25
Mount Royal.....	237	265	15.6	73	94	5.5	164	171	10.1	4	19	7	26
Outremont.....	302	351	11.7	275	334	11.1	27	17	0.6	7	24	13	37
Quebec.....	4,316	4,508	26.4	1,630	1,553	9.1	2,686	2,955	17.3	267	62	196	43
Rimouski.....	448	478	32.7	82	74	5.1	366	404	27.6	22	50	14	29
Rouyn.....	595	645	37.8	100	95	5.6	495	550	32.2	29	48	17	26
St. Hyacinthe.....	543	493	24.1	248	244	11.9	295	249	12.2	18	32	33	67
St. Jean.....	671	756	31.0	168	158	6.5	503	598	24.5	26	38	19	25
St. Jérôme.....	596	610	29.5	134	144	7.0	462	466	22.5	29	49	27	44
St. Laurent.....	886	1,098	28.7	163	213	5.6	723	885	23.1	21	23	22	20
St. Michel.....	553	956	38.7	76	125	5.1	477	831	33.6	15	27	33	35
Shawinigan Falls.....	866	856	29.9	179	176	6.2	687	680	23.7	32	37	44	51
Sherbrooke.....	1,751	1,765	30.1	463	442	7.5	1,288	1,323	22.6	72	41	60	34
Sillery.....	266	262	19.9	63	68	5.2	203	194	14.7	8	30	8	31
Sorel.....	510	476	28.9	137	130	7.9	373	346	21.0	27	52	14	29
Thetford Mines.....	574	663	34.0	126	142	7.3	448	521	26.7	27	46	28	42
Three Rivers.....	1,440	1,463	29.0	389	396	7.8	1,051	1,067	21.2	66	46	63	43
Valleyfield.....	725	743	31.5	190	177	7.5	535	566	24.0	34	47	27	36
Verdun.....	1,807	1,819	23.2	587	593	7.6	1,220	1,226	15.6	40	22	37	20
Victoriaville.....	476	513	32.0	147	142	8.9	329	371	23.1	35	73	26	51
Westmount.....	264	261	10.5	287	289	11.7	-23	-28	-1.2	8	30	5	19
Ontario—													
Barrie.....	432	560	33.2	137	151	9.0	295	409	24.2	11	25	14	25
Belleville.....	540	542	26.3	195	192	9.3	345	350	17.0	16	29	11	20
Brantford.....	989	1,184	22.8	409	513	9.9	580	671	12.9	28	28	32	27

¹ As at the 1951 Census.² Per 1,000 population.³ Per 1,000 live births.

2.—Summary of Principal Vital Statistics for Urban Centres of 10,000 Population or Over¹ 1951-56—concluded

Province and Urban Centre	Births			Deaths			Natural Increase			Infant Deaths				
	Av. 1951-1955	1956		Av. 1951-1955	1956		Av. 1951-1955	1956		Av. 1951-1955	1956			
	No.	No.	Rate ²	No.	No.	Rate ²	No.	No.	Rate ²	No.	Rate ³	No.	Rate ³	
Ontario—concluded														
Brockville.....	308	323	23.3	145	159	11.5	163	164	11.8	12	40	10	31	
Chatham.....	569	578	26.0	223	220	9.9	346	358	16.1	18	31	18	31	
Cornwall.....	507	476	26.2	166	173	9.5	341	303	16.7	16	32	14	29	
Eastview.....	619	839	43.5	91	119	6.2	528	720	37.3	21	34	24	29	
Forest Hill.....	232	259	13.3	107	138	7.1	125	121	6.2	3	15	3	12	
Fort William.....	991	981	24.9	319	310	7.9	672	671	17.0	21	21	25	25	
Galt.....	494	567	23.9	200	220	9.3	294	347	14.6	11	22	8	14	
Guelph.....	775	902	26.6	309	342	10.1	466	560	16.5	23	30	28	31	
Hamilton.....	5,682	6,173	25.8	2,014	2,076	8.7	3,668	4,097	17.1	161	28	146	24	
Kingston.....	1,182	1,329	27.3	448	472	9.7	734	857	17.6	36	31	39	29	
Kitchener.....	1,437	1,662	27.9	405	493	8.3	1,032	1,169	19.6	31	21	39	23	
Leaside.....	288	235	14.2	101	136	8.2	187	99	6.0	5	18	3	13	
London.....	2,428	2,496	24.5	1,074	1,050	10.3	1,354	1,446	14.2	62	26	62	25	
Mimico.....	308	334	24.4	107	92	6.7	201	242	17.7	5	18	5	15	
New Toronto.....	233	234	20.2	81	85	7.4	152	149	12.8	3	13	3	13	
Niagara Falls.....	595	571	24.2	233	253	10.7	362	318	13.5	18	30	9	16	
North Bay.....	558	630	30.0	182	181	8.6	376	449	21.4	18	32	16	25	
Orillia.....	375	365	26.3	134	152	11.0	241	213	15.3	13	34	11	30	
Oshawa.....	1,239	1,501	29.8	325	323	6.4	914	1,178	23.4	37	30	40	27	
Ottawa.....	5,325	5,620	25.3	2,006	2,137	9.6	3,319	3,483	15.7	166	31	167	30	
Owen Sound.....	412	438	25.8	187	192	11.3	225	246	14.5	13	32	8	18	
Pembroke.....	430	518	33.6	129	175	11.3	301	343	22.3	20	47	24	46	
Peterborough.....	1,104	1,069	25.0	349	407	9.5	755	662	15.5	28	25	32	30	
Port Arthur.....	956	995	26.1	347	349	9.2	609	646	16.9	24	25	31	31	
Port Colborne.....	360	388	27.7	101	95	6.8	259	293	20.9	12	32	10	26	
St. Catharines.....	903	886	22.3	369	424	10.7	534	462	11.6	21	23	24	27	
St. Thomas.....	405	391	20.4	233	237	12.4	172	154	8.0	10	24	8	20	
Sarnia.....	1,188	1,315	30.3	291	329	7.6	897	986	22.7	38	32	25	19	
Sault Ste. Marie.....	1,014	1,071	28.7	292	290	7.8	722	781	20.9	26	25	15	14	
Stratford.....	432	445	22.3	218	241	12.1	214	204	10.2	12	28	9	20	
Sudbury.....	1,623	1,669	35.9	303	312	6.7	1,320	1,357	29.2	54	34	42	25	
Timmins.....	821	805	29.2	202	243	8.8	619	562	20.4	31	38	26	32	
Toronto.....	14,750	15,106	22.6	7,630	7,377	11.0	7,120	7,729	11.6	372	25	381	25	
Trenton.....	366	387	33.7	89	98	8.5	277	289	25.2	12	32	8	21	
Waterloo.....	368	474	29.0	96	112	6.8	272	362	22.2	7	18	5	11	
Welland.....	427	367	22.4	118	151	9.2	309	216	13.2	10	23	9	25	
Windsor.....	3,110	3,027	24.8	1,105	1,089	8.9	2,005	1,938	15.9	94	30	92	30	
Woodstock.....	390	462	25.2	167	179	9.8	223	283	15.4	8	19	9	19	
Manitoba—														
Brandon.....	555	643	25.9	201	198	8.0	354	445	17.9	14	26	14	22	
St. Boniface.....	753	821	28.5	209	290	10.1	544	531	18.4	20	27	22	27	
Winnipeg.....	5,766	6,123	24.0	2,408	2,469	9.7	3,358	3,654	14.3	147	26	144	24	
Saskatchewan—														
Moose Jaw.....	774	887	30.0	287	284	9.6	487	603	20.4	21	27	25	28	
Prince Albert.....	558	608	29.9	133	161	7.9	425	447	22.0	16	29	23	38	
Regina.....	2,143	2,609	29.1	589	677	7.5	1,554	1,932	21.6	49	23	66	25	
Saskatoon.....	1,811	2,217	30.4	529	595	8.2	1,282	1,622	22.2	50	28	47	21	
Alberta—														
Calgary.....	4,462	5,851	32.2	1,304	1,362	7.5	3,158	4,489	24.7	119	27	99	17	
Edmonton.....	6,481	8,037	35.6	1,346	1,463	6.5	5,135	6,574	29.1	151	23	175	22	
Lethbridge.....	816	871	29.6	195	210	7.1	621	661	22.5	20	25	27	31	
Medicine Hat.....	464	572	27.5	173	202	9.7	291	370	17.8	9	20	10	17	
British Columbia—														
New Westminster.....	584	632	20.0	272	331	10.5	312	301	9.5	11	19	14	22	
North Vancouver.....	647	582	29.2	190	195	9.8	457	387	19.4	13	19	14	24	
Penticton.....	247	255	21.4	71	109	9.2	176	146	12.2	8	32	4	16	
Trail.....	380	359	31.5	74	88	7.7	306	271	23.8	8	21	8	22	
Vancouver.....	7,738	7,876	21.5	4,223	4,472	12.2	3,515	3,404	9.3	171	22	167	21	
Victoria.....	1,159	1,272	23.3	768	806	14.8	391	466	8.5	25	21	28	22	

¹ As at the 1951 Census.² Per 1,000 population.³ Per 1,000 live births.

Section 2.—Births*

The Canadian birth rate in 1921 was 29 per 1,000 population. As a rate of 35 is very high for countries of modern western civilization, the Canadian rate had probably not fallen far, nor for long, before 1921. It fell continuously until 1937 when it reached a low of 20, but as a result of economic recovery and the War, it rose to 22 in 1940, 24 in 1943 and a record high of 28.9 in 1947. Since then the rate has fluctuated moderately between just over 27 in 1950 and 1951 and 28.5 in 1954. The 1956 figure was 28.0.

The birth rates in most provinces followed similar trends but there were some regional differences in the birth rate pattern in recent years. Although all provinces had record high rates immediately following World War II, average birth rates in Ontario and the western provinces were higher during 1951-55 than those for the 1946-50 period, while those for Quebec and the Maritimes were lower. In fact, Ontario, British Columbia and Alberta had all-time record high crude birth rates during the three years 1954 to 1956.

It has always been assumed that the Province of Quebec has had the highest birth rate in Canada, but Table 1 shows that since the late 1930's or early 1940's Newfoundland and New Brunswick have had higher births rates than Quebec. In 1956, Newfoundland had a crude rate of 35.0, followed by Alberta with a rate of 31.1, New Brunswick 29.9 and Quebec 29.4; Manitoba and British Columbia had the lowest rates with 25.8 and 25.9 respectively. However these crude rates are based on total population and therefore do not reflect the fertility of the women who are of reproductive age in the different provinces. A more accurate measure of fertility is the rate based on the number of married women in the population in the reproductive age group, 15 to 49. The following figures, based on the 1956 Census and births in 1956 give the birth rates per 1,000 married women in the age group 15 to 49 by province:—

Newfoundland.....	242	Ontario.....	146	Yukon.....	199
Prince Edward Island....	186	Manitoba.....	148	N.W.T.....	261
Nova Scotia.....	167	Saskatchewan.....	163		
New Brunswick.....	197	Alberta.....	172	CANADA.....	164
Quebec.....	188	British Columbia.....	141		

On this basis if we exclude the Yukon and Northwest Territories†, Newfoundland still had the highest fertility rate followed by New Brunswick and Quebec, and British Columbia had the lowest.

Also, contrary to popular impression, since 1953 more babies were born each year in Ontario than in the Province of Quebec; in 1956, 143,516 babies were born to Ontario mothers as compared with 135,884 to Quebec mothers. A record total of 450,739 were born to Canadian mothers in 1956, 7,802 more than in the previous year.

Sex of Live Births.—Wherever birth statistics have been collected they have shown an excess of male over female births. No conclusive explanation of this excess has yet been given. Nevertheless it is so much of an accepted statistical fact that a proper ratio of male to female births has become one of the criteria of complete registration. The number of males to every 1,000 females born in Canada in 1941-54 varied between 1,052 and 1,067. In 1956 there were 1,058 males born for every 1,000 females. Variations in the provincial sex ratios result from chance variation because of the relatively small number of births involved—the smaller the total number of births, the greater the chance of wide sex-ratio variations from year to year.

* For international comparisons see Section 7, pp. 230-231.

† Most of the population of these areas, particularly the Northwest Territories, is made up of Indians and Eskimos whose fertility rate is considerably higher than that of white women.

3.—Sex Ratio of Live Births by Province 1921-56

Province and Year	Male	Female	Males to 1,000 Females	Province and Year	Male	Female	Males to 1,000 Females
No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland.....1951	5,984	5,754	1,040	Manitoba—concl. 1951	10,374	9,568	1,084
1955	7,505	7,252	1,035	1955	11,468	10,929	1,049
1956	7,399	7,142	1,036	1956	11,214	10,731	1,045
P.E. Island.....1921	1,073	1,083	991	Saskatchewan.....1921	11,620	10,873	1,069
1931	998	881	1,132	1931	10,942	10,389	1,053
1941	1,078	971	1,110	1941	9,472	8,992	1,053
1951	1,373	1,278	1,074	1951	11,107	10,626	1,045
1955	1,455	1,329	1,085	1955	12,605	12,141	1,038
1956	1,313	1,344	977	1956	12,409	11,650	1,065
Nova Scotia.....1921	6,695	6,326	1,058	Alberta.....1921	8,493	8,068	1,053
1931	5,931	5,684	1,043	1931	8,938	8,314	1,075
1941	7,074	6,829	1,036	1941	8,882	8,426	1,054
1951	8,842	8,283	1,067	1951	13,760	13,243	1,039
1955	9,746	9,221	1,057	1955	17,728	16,629	1,066
1956	9,970	9,136	1,091	1956	17,985	16,966	1,060
New Brunswick.....1921	5,942	5,523	1,076	British Columbia...1921	5,549	5,104	1,087
1931	5,548	5,253	1,056	1931	5,350	5,054	1,059
1941	6,200	6,072	1,021	1941	7,694	7,344	1,048
1951	8,190	7,885	1,039	1951	14,418	13,659	1,056
1955	8,463	8,146	1,039	1955	17,366	16,772	1,035
1956	8,594	7,979	1,077	1956	18,443	17,798	1,036
Quebec.....1921	46,705	42,044	1,111	Yukon.....1951	173	169	1,024
1931	43,051	40,555	1,062	1955	267	257	1,039
1941	45,905	43,304	1,060	1956	263	218	1,206
1951	62,160	58,770	1,058	Northwest Territories.....1951	317	332	955
1955	68,681	64,691	1,062	1955	366	366	1,000
1956	70,016	65,868	1,063	1956	410	375	1,093
Ontario.....1921	38,307	35,845	1,069	Canada.....1921 ¹	133,839	123,889	1,080
1931	35,609	33,600	1,060	1931	123,622	116,851	1,058
1941	37,254	35,008	1,064	1941	131,175	124,142	1,057
1951	59,220	55,607	1,065	1951	195,918	185,174	1,058
1955	71,732	67,822	1,058	1955	227,382	215,555	1,055
1956	73,681	69,835	1,055	1956	231,697	219,042	1,058
Manitoba.....1921	9,455	9,023	1,048				
1931	7,255	7,121	1,019				
1941	7,616	7,196	1,058				

¹ Excludes Newfoundland and the Yukon and Northwest Territories.

Hospitalized Births.—In 1956 over 88 p.c. of all Canadian births occurred in hospital. Although the proportions of hospitalized births have increased steadily since 1921 in all provinces these proportions still vary widely. The existence of prepaid or provincially sponsored hospital, maternity or medical care plans in some provinces, the unavailability of hospital facilities in others—particularly in remote rural areas—and preference for home delivery in some local areas are among the factors accounting for provincial variations in this respect. The noticeable increases in hospitalized births within recent years in those provinces that previously had the lowest proportion may be partly the result of increased hospital services and facilities being provided in those areas.

4.—Percentage of Live Births Hospitalized by Province 1931-56

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1931.....	11.2	19.0	12.1	7.3	38.2	43.6	32.5	47.8	65.0	..	..	26.8
1941.....	32.7	50.4	30.8	17.6	67.5	73.6	63.2	77.1	87.3	..	..	48.9
1951.....	88.3	87.2	70.7	53.0	93.1	93.1	95.2	93.6	97.3	87.4	32.8	79.1
1955.....	93.6	93.3	83.4	66.6	96.7	95.6	97.7	95.0	98.1	89.3	45.5	86.5
1956.....	95.2	93.9	84.7	71.2	97.3	95.8	97.6	96.6	98.3	87.7	44.6	88.4

Births in Urban Centres.—Table 2, pp. 199-200, shows the number of births in 1956, regardless of where they occurred, to mothers residing in urban centres of 10,000 population or over. Because of the much greater proportion of young married couples in these areas, the crude birth rates are, on the whole, much higher than in other areas.

Illegitimacy.*—In 1956 less than 4 p.c. of the live births in Canada were illegitimate. This percentage is low compared with that of many countries of the world. In the five-year period 1926-30 it was 3 p.c., whereas the average of the years 1951-55 was 3.8 p.c.

5.—Illegitimate Live Births and Percentages of Total Live Births by Province 1921-56

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada ¹
ILLEGITIMATE LIVE BIRTHS													
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Av. 1921-25..	..	46	457	245	..	1,658	407	291	321	152	..	..	..
" 1926-30..	168	42	558	299	2,334	2,196	501	489	479	240	..	..	7,138
" 1931-35..	205	74	652	373	2,431	2,707	501	651	613	330	..	..	8,333
" 1936-40..	246	83	766	415	2,539	2,939	506	663	643	475	..	..	9,030
" 1941-45..	406	107	1,074	591	3,003	3,751	597	673	852	889	..	..	11,536
" 1946-50..	441	152	1,244	754	3,382	4,256	766	914	1,202	1,516	..	..	14,375
" 1951-55..	426	139	1,082	659	4,086	4,065	969	1,044	1,481	1,898	..	..	15,848
1951.....	417	138	1,147	643	3,650	3,807	771	971	1,272	1,633	41	47	14,537
1952.....	315	118	1,041	648	3,913	3,920	952	994	1,310	1,857	53	53	15,174
1953.....	411	145	1,034	661	4,163	4,080	988	1,043	1,559	1,896	39	45	16,064
1954.....	488	127	1,060	658	4,420	4,251	1,094	1,128	1,562	2,042	68	49	16,947
1955.....	497	168	1,126	685	4,285	4,266	1,040	1,082	1,702	2,062	66	55	17,034
1956.....	529	154	1,194	688	4,454	4,415	1,002	1,058	1,674	2,207	60	75	17,510
PERCENTAGES OF TOTAL LIVE BIRTHS													
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Av. 1921-25..	..	2.3	3.8	2.2	..	2.3	2.5	1.3	2.1	1.5	..	..	..
" 1926-30..	2.5	2.4	5.1	2.9	2.8	3.2	3.5	2.3	3.0	2.3	..	..	3.0
" 1931-35..	3.1	3.8	5.7	3.6	3.1	4.2	3.7	3.2	3.7	3.3	..	..	3.6
" 1936-40..	3.2	4.0	6.4	3.7	3.2	4.6	3.7	3.6	3.9	3.9	..	..	3.9
" 1941-45..	4.4	4.9	7.1	4.5	3.1	4.8	3.8	3.6	4.5	5.0	..	..	4.2
" 1946-50..	3.6	5.3	6.9	4.5	2.9	4.0	4.0	4.2	4.9	5.9	..	..	4.1
" 1951-55..	3.2	5.1	5.9	4.0	3.2	3.2	4.5	4.4	4.8	6.1	..	..	3.8
1951.....	3.6	5.2	6.7	4.0	3.0	3.3	3.9	4.5	4.7	5.8	12.0	7.2	3.8
1952.....	2.5	4.4	5.8	3.9	3.1	3.2	4.6	4.4	4.5	6.2	13.6	8.3	3.8
1953.....	3.2	5.3	5.7	4.0	3.2	3.1	4.7	4.4	5.0	6.0	10.2	6.7	3.8
1954.....	3.6	4.7	5.6	4.0	3.3	3.1	4.9	4.5	4.6	6.2	16.0	7.8	3.9
1955.....	3.4	6.0	5.9	4.1	3.2	3.1	4.6	4.4	5.0	6.0	12.6	7.5	3.8
1956.....	3.6	5.8	6.2	4.2	3.3	3.1	4.6	4.4	4.8	6.1	12.5	9.6	3.9

¹ Figures for Newfoundland are included for 1949-56 only; and for the Yukon and Northwest Territories for 1951-56 only.

Stillbirths†—The rate of stillbirths has been falling since 1926 though not equally in all provinces. The rate of stillbirths among unmarried mothers has always been considerably higher than that for married mothers and consequently higher than the over-all rate but this difference has been disappearing in recent years.

* The term "illegitimate", for statistical purposes, does not refer to births conceived out of wedlock but those in which parents reported themselves as not having been married to each other at the time of the birth or the registration of the birth.

† A stillbirth is defined as the birth of a foetus after at least 28 weeks pregnancy which, after complete separation from the mother, does not show any sign of life.

6.—Stillbirths and Rates per 1,000 Live Births by Province 1921-56

Year	Born to All Mothers													Born to Un-married Mothers ¹	
	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada ²	No.	P.C. of Total
STILLBIRTHS															
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.		
Av. 1921-25	..	57	457	288	2,659	3,083	546	601	418	295	..	..	8,403	..	..
" 1926-30	128	43	365	283	2,212	2,761	479	551	467	297	..	..	7,458	356	4.77
" 1931-35	141	67	401	302	2,337	2,284	383	488	421	247	..	..	6,930	381	5.50
" 1936-40	162	61	334	282	2,386	2,008	340	393	359	248	..	..	6,410	337	5.26
" 1941-45	191	50	388	295	2,786	1,988	345	348	327	309	..	..	6,838	355	5.20
" 1946-50	215	54	358	320	2,898	2,020	349	350	385	352	..	..	7,177	343	4.85
" 1951-55	222	52	337	291	2,705	2,017	336	313	425	374	..	..	7,071	314	4.58
1951.....	189	56	319	293	2,768	1,975	340	303	402	365	2	11	7,023	328	4.80
1952.....	226	45	369	281	2,805	2,085	361	314	399	375	6	11	7,277	343	4.86
1953.....	213	55	337	307	2,592	1,952	345	319	476	375	10	10	6,991	291	4.29
1954.....	242	59	326	313	2,805	2,027	323	327	418	373	5	13	7,231	297	4.25
1955.....	242	44	332	263	2,556	2,044	309	300	431	381	6	10	6,918	319	4.78
1956.....	260	51	337	331	2,584	1,969	316	291	409	413	4	11	6,976	311	4.63
RATES PER 1,000 LIVE BIRTHS														Rate per 1,000 Illegitimate Live Births ¹	
Av. 1921-25	..	29.1	37.7	26.0	30.5	43.1	32.9	27.9	27.0	28.7	..	..	33.9	..	
" 1926-30	19.0	24.8	33.1	27.4	26.7	40.2	33.3	25.9	29.3	28.7	..	..	31.5	49.9	
" 1931-35	21.1	34.2	34.9	28.9	29.6	35.1	28.0	24.0	25.4	24.7	..	..	30.3	45.7	
" 1936-40	21.2	29.7	27.7	25.4	30.4	31.2	25.2	21.0	22.0	20.5	..	..	28.0	37.3	
" 1941-45	20.5	22.8	25.6	22.6	28.5	25.6	21.8	18.9	17.4	17.5	..	..	24.7	30.8	
" 1946-50	17.4	18.9	19.9	19.0	25.1	19.2	18.1	16.0	15.9	13.6	..	..	20.2	24.2	
" 1951-55	17.0	19.0	18.4	17.7	21.0	15.6	15.7	13.3	13.7	11.9	..	..	17.0	20.4	
1951.....	16.1	21.1	18.6	18.2	22.9	17.2	17.0	13.9	14.9	13.0	5.8	16.9	18.4	23.2	
1952.....	18.0	16.6	20.6	16.8	22.2	16.8	17.4	13.9	13.7	12.6	15.4	17.1	18.0	23.1	
1953.....	16.6	20.1	18.4	18.7	20.1	15.0	16.2	13.5	15.2	11.8	26.1	14.8	16.7	18.6	
1954.....	17.7	21.7	17.2	18.8	21.1	14.9	14.5	13.1	12.4	11.3	11.8	20.6	16.6	18.0	
1955.....	16.4	15.8	17.5	15.8	19.2	14.6	13.8	12.1	12.5	11.2	11.5	13.7	15.6	19.3	
1956.....	17.9	19.2	17.6	20.0	19.0	13.7	14.4	12.1	11.7	11.4	8.3	14.0	15.5	18.3	

¹ Exclusive of Newfoundland.² Figures for Newfoundland are included for 1949-56 only and for the Yukon and Northwest Territories for 1951-56 only.

Multiple Births.—Approximately one confinement in 85 in Canada results in the birth of more than one child. The proportion of stillbirths is higher among multiple than among single births. It is about twice as high for twins and between three and five times as high for triplets.

7.—Single and Multiple Births, Live and Stillborn 1953-56

Confinements and Births	Numbers				Percentages			
	1953 ¹	1954 ¹	1955 ¹	1956	1953 ¹	1954 ¹	1955 ¹	1956
Confinements	419,135	437,417	443,586	452,607	100.0	100.0	100.0	100.9
Single.....	414,529	432,525	438,639	447,547	98.9	98.9	98.9	98.1
Twin.....	4,553	4,847	4,897	5,012	1.1	1.1	1.1	1.0
Triplet.....	51	44	50	48	--	--	--	--
Quadruplet.....	2	1	—	—	--	--	--	--
Births	423,796	442,355	448,583	457,715	100.0	100.0	100.0	100.0
Single—								
Live.....	407,898	425,615	432,089	440,916	98.4	98.4	98.5	98.5
Stillborn.....	6,631	6,910	6,550	6,631	1.6	1.6	1.5	1.5
Twin—								
Live.....	8,777	9,398	9,453	9,683	96.4	96.9	96.5	96.6
Stillborn.....	329	296	341	341	3.6	3.1	3.5	3.4
Triplet—								
Live.....	142	125	139	140	92.8	94.7	92.7	97.2
Stillborn.....	11	7	11	4	7.2	5.3	7.3	2.8
Quadruplet—								
Live.....	8	4	—	—	100.0	100.0	—	—
Stillborn.....	—	—	—	—	—	—	—	—
Totals, Live Births	416,825	435,142	441,681	450,739	98.4	98.4	98.5	98.5
Totals, Stillborn	6,971	7,213	6,902	6,976	1.6	1.6	1.5	1.5

¹ Excludes the Yukon and Northwest Territories.

Fertility Rates.—Sex and age distribution of the population is an important factor in determining birth, death and marriage rates. More than 95 p.c. of children born are to women between the ages of 15 and 50, so that, as noted earlier, variations in the proportion of women of these ages to the population as a whole will cause variations in the crude birth rates of different countries or regions even though the fertility of women at each age may be the same. Measures of fertility which are independent of the sex and age distribution of the population have therefore been devised. The best known of these are age-specific fertility rates and reproduction rates.

Ages of Parents.—Ages of the parents is an important variable in any analysis of birth statistics. The numerical and percentage distribution of legitimate live births by the age group of the parents is given for 1955 and 1956 in Table 8, of illegitimate live births by the age group of the mother in Table 9, and of stillbirths by the age group of the mother in Table 10, as well as the average ages of the parents for each year shown.

About 6 p.c. of the legitimate children born each year are born to mothers under 20 years of age, in about one-third of the births the mother is under 25 years, and in almost two-thirds, under 30 years; in 45 p.c. of all births the father is under 30 years of age. On the other hand one-third of the illegitimate infants born are born to mothers under 20, and an additional one-third to mothers under 25 years of age.

Table 10 illustrates the fact that the risk of having a stillborn child increases with the age of the mother. The stillbirth rate is almost three times as high among mothers 40-44 and about six times as high among those of 45-49 years as it is for mothers under 30. Further, most of the reduction in stillbirths in recent years has been among young mothers.

8.—Legitimate Live Births by Age of Parent 1955 and 1956

(Exclusive of Newfoundland and the Yukon and Northwest Territories in 1955 and of Newfoundland only in 1956)

Age Group	Fathers				Mothers			
	1955		1956		1955		1956	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Under 20 years.....	3,308	0.8	3,340	0.8	24,300	5.9	25,628	6.1
20 — 24 ".....	63,845	15.6	66,401	15.9	112,687	27.5	115,871	27.7
25 — 29 ".....	119,590	29.2	124,172	29.7	121,669	29.6	124,576	29.7
30 — 34 ".....	101,919	24.9	103,219	24.7	88,322	21.5	88,852	21.2
35 — 39 ".....	64,724	15.8	65,613	15.7	47,157	11.5	48,119	11.5
40 — 44 ".....	35,533	8.7	35,249	8.4	15,105	3.7	14,868	3.5
45 — 49 ".....	14,224	3.5	13,788	3.3	1,111	0.3	1,135	0.3
50 years or over.....	5,936	1.5	5,956	1.4	11	--	12	--
Totals, Stated Ages.....	499,079	100.0	417,738	100.0	410,362	100.0	419,961	100.0
Ages not stated.....	1,429	...	1,479	...	146	...	156	...
Totals, All Ages.....	410,508	100.0	419,217	100.0	410,508	100.0	419,217	100.0
Average ages.....	31.8		31.7		28.4		28.4	

9.—Illegitimate Live Births by Age of the Mother 1955 and 1956

(Exclusive of Newfoundland and the Yukon and Northwest Territories in 1955 and of Newfoundland only in 1956)

Age Group of Mother	1955		1956	
	No.	p.c.	No.	p.c.
Under 20 years.....	5,106	32.1	5,493	33.4
20 — 24 ".....	5,726	36.0	5,626	34.2
25 — 29 ".....	2,642	16.6	2,783	16.9
30 — 34 ".....	1,457	9.2	1,486	9.0
35 — 39 ".....	746	4.7	799	4.9
40 — 44 ".....	227	1.4	255	1.5
45 — 49 ".....	18	0.1	18	0.1
50 years or over.....	—	—	1	--
Totals, Stated Ages.....	15,922	100.0	16,461	100.0
Ages not stated.....	494	...	520	...
Totals, All Ages.....	16,416	100.0	16,981	100.0
Average ages of mothers.....	24.1		24.1	

10.—Stillbirths and Rates per 1,000 Live Births by Age of Mother 1955 and 1956

(Exclusive of Newfoundland and the Yukon and Northwest Territories in 1955 and of Newfoundland only in 1956)

Age Group of Mother	Stillbirths				Rates per 1,000 Live Births	
	1955		1956		1955	1956
	No.	p.c.	No.	p.c.		
Under 20 years.....	359	5.4	411	6.2	12.2	13.2
20 — 24 ".....	1,463	22.1	1,349	20.2	12.4	11.1
25 — 29 ".....	1,664	25.1	1,631	24.4	13.4	12.8
30 — 34 ".....	1,432	21.6	1,507	22.6	16.0	16.7
35 — 39 ".....	1,123	16.9	1,176	17.6	23.4	24.0
40 — 44 ".....	501	7.6	528	7.9	32.7	34.9
45 — 49 ".....	86	1.3	75	1.1	76.2	65.0
50 years or over.....	1	--	1	--	--	--
Totals, Stated Ages.....	6,629	100.0	6,678	100.0	...	...
Ages not stated.....	31	...	38	...	...	...
Totals, All Ages.....	6,660	100.0	6,716	100.0	15.6	15.4
Average ages of mothers.....	30.1		30.3		...	...

Order of Birth.—Table 11 shows the order of birth of all live-born infants in 1955 and 1956 according to the age of the mother. As would be expected 23,315, or three out of every four, of the 30,975 infants born to mothers under 20 years of age were a first child, whereas almost six out of every ten of the children born to mothers of 20-24 years were a second or later child. This is a reflection of the earlier marriages and heavy fertility of recent years.

Table 12 summarizes the pattern of family formation since 1927. The results of the immediate postwar 'baby boom' are obvious—57.9 p.c. of the infants born in 1947 was a first or second child while 50.5 p.c. of the 1956 baby crop was a third or fourth child.

11.—Order of Birth of Live-Born Children by Age of Mother 1955 and 1956

(Exclusive of Newfoundland and the Yukon and Northwest Territories in 1955 and of Newfoundland only in 1956)

Order of Birth of Child	Age of Mother										Percentage of Total
	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 or Over	Age Not Stated	All Ages	
1955	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
1st child.....	141	22,163	51,976	26,687	9,956	3,367	815	50	479	115,634	27.1
2nd ".....	1	5,879	38,133	35,075	16,814	5,558	1,133	55	48	102,696	24.1
3rd ".....	—	1,042	17,970	27,375	19,805	7,859	1,648	73	25	75,797	17.8
4th ".....	—	163	6,982	16,601	15,088	7,540	1,875	88	17	48,354	11.3
5th ".....	—	12	2,364	9,263	9,983	5,888	1,747	105	11	29,373	6.9
6th ".....	—	4	691	4,957	6,561	4,530	1,437	85	8	18,273	4.3
7th ".....	—	—	209	2,517	4,357	3,458	1,235	100	3	11,879	2.8
8th ".....	—	—	56	1,139	2,913	2,685	1,111	86	2	7,992	1.9
9th ".....	—	—	19	440	1,934	2,043	905	91	1	5,433	1.3
10th ".....	—	—	4	161	1,148	1,683	756	59	2	3,813	0.9
11th ".....	—	—	4	62	619	1,203	686	65	1	2,640	0.6
12th ".....	—	—	—	17	344	857	575	54	—	1,847	0.4
13th ".....	—	—	—	1	114	537	416	58	2	1,136	0.3
14th ".....	—	—	—	1	81	325	362	39	—	808	0.2
15th ".....	—	—	—	2	39	184	222	29	—	497	0.1
16th ".....	—	—	—	1	10	87	155	29	—	312	0.1
17th ".....	—	—	—	—	3	46	98	29	—	176	—
18th ".....	—	—	—	—	5	32	57	8	—	102	—
19th ".....	—	—	—	—	—	11	34	7	—	52	—
20th or over.....	—	—	—	—	—	3	33	7	—	43	—
Not stated.....	—	1	5	4	5	7	2	2	41	67	1
Totals.....	142	29,264	118,413	124,311	89,779	47,903	15,332	1,140	640	426,924	100.0

— 1 Less than 0.1 p.c.

11.—Order of Birth of Live-Born Children by Age of Mother 1955 and 1956—concluded

Order of Birth of Child	Age of Mother										Percentage of Total
	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 or Over	Age Not Stated	All Ages	
1956	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
1st child.....	144	23,315	52,026	26,818	9,713	3,413	773	52	466	116,720	26.8
2nd ".....	2	6,388	39,301	35,409	16,545	5,658	1,118	43	51	104,515	24.0
3rd ".....	—	1,074	19,011	28,608	19,432	7,791	1,605	68	24	77,613	17.8
4th ".....	—	155	7,456	17,151	15,460	7,810	1,794	96	20	49,942	11.4
5th ".....	—	17	2,580	9,520	10,212	6,064	1,701	102	12	30,208	6.9
6th ".....	—	2	827	5,130	6,783	4,578	1,506	91	6	18,923	4.3
7th ".....	—	—	197	2,670	4,555	3,539	1,229	105	11	12,306	2.8
8th ".....	—	—	48	1,236	3,059	2,743	997	85	1	8,169	1.9
9th ".....	—	—	17	492	1,982	2,179	944	66	1	5,681	1.3
10th ".....	—	—	3	197	1,269	1,731	804	84	2	4,090	0.9
11th ".....	—	—	1	69	687	1,280	668	66	1	2,772	0.6
12th ".....	—	—	1	24	358	850	568	75	2	1,878	0.4
13th ".....	—	—	—	9	156	534	472	68	—	1,239	0.3
14th ".....	—	—	—	4	58	347	314	48	—	771	0.2
15th ".....	—	—	—	1	26	206	218	41	—	492	0.1
16th ".....	—	—	—	—	19	90	172	23	—	304	0.1
17th ".....	—	—	—	—	3	50	112	14	—	179	—
18th ".....	—	—	—	—	1	22	54	18	—	95	—
19th ".....	—	—	—	—	2	8	32	9	—	51	—
20th or over.....	—	—	—	—	—	7	35	11	—	53	—
Not stated.....	—	24	29	21	18	18	7	1	79	197	—
Totals.....	146	30,975	121,497	127,359	90,338	48,918	15,123	1,166	676	436,198	100.0

¹ Less than 0.1 p.c.

12.—Percentage Distribution of Legitimate Live Births by Birth Order 1927-56

(Exclusive of Newfoundland for all years and the Yukon and Northwest Territories for all years except 1956)

Year	1st child	2nd child	3rd child	4th and later children	Total
1927.....	21.0	17.6	14.0	47.4	100.0
1928.....	21.8	17.8	13.9	46.5	100.0
1929.....	22.9	18.4	13.8	44.8	100.0
1930.....	23.6	18.8	13.7	43.9	100.0
1931.....	23.0	19.3	14.0	43.8	100.0
1932.....	22.1	19.4	14.2	44.3	100.0
1933.....	21.7	19.3	14.6	44.4	100.0
1934.....	22.2	19.0	14.4	44.4	100.0
1935.....	24.0	18.9	14.0	43.1	100.0
1936.....	25.3	19.2	13.4	42.1	100.0
1937.....	26.6	19.8	13.4	40.2	100.0
1938.....	28.2	20.6	13.3	38.0	100.0
1939.....	28.6	21.3	13.7	36.4	100.0
1940.....	30.3	22.1	13.8	33.9	100.0
1941.....	32.7	21.8	13.5	32.0	100.0
1942.....	32.8	23.1	13.4	30.6	100.0
1943.....	32.2	23.7	14.2	29.9	100.0
1944.....	30.0	24.2	14.9	30.9	100.0
1945.....	28.9	24.3	15.4	31.4	100.0
1946.....	31.0	24.8	15.2	29.0	100.0
1947.....	33.0	24.9	15.0	27.2	100.0
1948.....	29.6	26.0	15.9	28.5	100.0
1949.....	27.8	26.6	16.8	28.8	100.0
1950.....	26.8	26.2	17.4	29.6	100.0
1951.....	26.7	25.8	17.6	29.9	100.0
1952.....	27.0	24.9	17.9	30.3	100.0
1953.....	26.5	25.0	18.0	30.6	100.0
1954.....	26.2	24.6	18.0	31.2	100.0
1955.....	25.5	24.4	18.2	31.9	100.0
1956.....	25.2	24.3	18.3	32.2	100.0

Section 3.—Deaths*

Since 1931 the Canadian death rate has fluctuated between 10.3 and 8.2 per 1,000 of the population, declining in recent years to a record low of 8.2 in 1954 through 1956. Table 1, pp. 196-198, shows that this decline has been apparent in varying degrees in all provinces. The generally low rates in the Prairie Provinces are partly the result of their younger average population; the uniformly higher rate in British Columbia is the result of the high proportion of people in the older age groups.

Subsection 1.—General Mortality

Sex and Age Distribution of Deaths.—Despite reductions in infant mortality over the past 25 or 30 years, more deaths still occur in the first year of life than in any other single year. Of the 107,000 deaths occurring in 1926, 31,000 or almost 30 p.c. were of children under five years of age and three-quarters of those were of children under one year of age. Of approximately 132,000 deaths in 1956, close to 17,000 or nearly 13 p.c. were of children under five years of age and over 85 p.c. of those were under one year. Most of the reduction took place among children over the age of one month but there was a notable decrease in all childhood ages up to five years.

Tremendous reductions have taken place in the mortality pattern since the early 1920's, with the most important reductions in the childhood and early adult ages. In 1931 over 19 p.c. of all male deaths were of persons five to 45 years of age; in 1956 these accounted for less than 11 p.c. of total deaths. The reduction in mortality among females in this age group is equally remarkable, the proportion dropping from almost 22 p.c. to approximately 8 p.c. Death rates for males up to age 45 have been roughly halved during the past 25 years; those for females in the same ages have been reduced as much as three to four times.

These reductions in the mortality rates in early and middle years of life have had the effect of increasing the number of people in the older age groups and of raising the average age of the population as a whole. As a consequence much larger proportions of deaths are now occurring at the older ages and have raised the average age at death. In 1921 the average age at death of males was 39.0 years and of females 41.1 years; by 1956 this had advanced to 58.0 and 60.6 respectively. These trends are indicated clearly in Table 13.

* For international comparisons, see Section 7, pp. 230-231.

13.—Distribution of Deaths by Age and Sex 1921, 1931, 1941, 1955 and 1956

Age Group	1921 ¹		1931 ²		1941 ²		1955		1956	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NUMBERS										
Under 5 years.....	10,827	8,303	14,511	11,226	10,666	8,014	9,266	6,899	9,393	7,351
5 — 9 ".....	1,166	979	1,241	963	888	670	666	435	697	416
10 — 14 ".....	674	611	821	806	787	536	474	283	452	264
15 — 19 ".....	866	741	1,311	1,132	1,118	823	724	314	733	294
20 — 24 ".....	947	946	1,502	1,453	1,332	1,039	949	352	969	340
25 — 29 ".....	1,046	1,035	1,388	1,414	1,317	1,173	947	484	999	491
30 — 34 ".....	1,002	1,051	1,301	1,432	1,211	1,148	1,058	681	1,109	592
35 — 39 ".....	1,263	1,223	1,512	1,574	1,497	1,742	1,181	840	1,301	843
40 — 44 ".....	1,254	1,073	1,888	1,493	1,744	1,464	1,776	1,149	1,752	1,188
45 — 49 ".....	1,345	1,066	2,314	1,738	2,416	1,817	2,517	1,525	2,661	1,571
50 — 54 ".....	1,492	1,288	2,855	1,993	3,355	2,227	3,659	1,941	3,649	2,013
55 — 59 ".....	1,727	1,397	3,057	2,246	4,394	2,851	4,775	2,738	5,002	2,712
60 — 64 ".....	2,121	1,652	3,583	2,855	5,288	3,483	6,335	3,650	6,383	3,826
65 — 69 ".....	2,277	1,976	4,249	3,348	6,057	4,412	8,463	5,025	8,482	5,047
70 — 74 ".....	2,550	2,184	4,867	4,073	6,495	4,981	9,744	6,618	10,013	6,786
75 — 79 ".....	2,378	2,135	4,368	4,029	6,421	5,461	9,359	7,258	9,404	7,607
80 — 84 ".....	1,833	1,799	3,206	3,215	5,020	4,906	7,097	6,368	7,385	6,787
85 years or over.....	1,643	1,912	2,555	2,998	3,946	4,540	5,893	7,033	6,192	7,257
Totals, All Ages.....	36,411	31,311	56,529	47,988	63,852	50,787	74,883	53,593	76,576	55,385

For footnotes, see end of table, p. 210.

13.—Distribution of Deaths by Age and Sex 1921, 1931, 1941, 1955 and 1956—concluded

Age Group	1921 ¹		1931 ²		1941 ²		1955		1956	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
PERCENTAGES										
Under 5 years.....	29.8	26.5	25.7	23.4	16.7	15.8	12.4	12.9	12.3	13.3
5 — 9 “.....	3.2	3.1	2.2	2.0	1.4	1.3	0.9	0.8	0.9	0.8
10 — 14 “.....	1.9	2.0	1.5	1.7	1.2	1.1	0.6	0.5	0.6	0.5
15 — 19 “.....	2.4	2.4	2.3	2.4	1.8	1.6	1.0	0.6	1.0	0.5
20 — 24 “.....	2.6	3.0	2.7	3.0	2.1	2.0	1.3	0.7	1.3	0.6
25 — 29 “.....	2.9	3.3	2.5	2.9	2.1	2.3	1.3	0.9	1.3	0.9
30 — 34 “.....	2.7	3.4	2.3	3.0	1.9	2.3	1.4	1.3	1.4	1.1
35 — 39 “.....	3.5	3.9	2.7	3.3	2.3	2.4	1.6	1.6	1.7	1.5
40 — 44 “.....	3.4	3.4	3.3	3.1	2.7	2.9	2.4	2.1	2.3	2.1
45 — 49 “.....	3.7	3.4	4.1	3.6	3.8	3.6	3.4	2.8	3.5	2.8
50 — 54 “.....	4.1	4.1	5.0	4.2	5.3	4.4	4.9	3.6	4.8	3.6
55 — 59 “.....	4.7	4.3	5.4	4.7	6.9	5.6	6.4	5.1	6.5	4.9
60 — 64 “.....	5.8	5.3	6.3	5.9	8.3	6.9	8.5	6.8	8.3	6.9
65 — 69 “.....	6.2	6.3	7.5	7.0	9.5	8.7	11.3	9.4	11.1	9.1
70 — 74 “.....	7.0	7.0	8.6	8.5	10.2	9.8	13.0	12.3	13.1	12.3
75 — 79 “.....	6.5	6.8	7.7	8.4	10.1	10.7	12.5	13.5	12.3	13.7
80 — 84 “.....	5.0	5.7	5.7	6.7	7.9	9.7	9.5	11.9	9.6	12.3
85 years or over.....	4.5	6.1	4.5	6.2	6.0	8.9	7.9	13.1	8.1	13.1
Totals, All Ages.....	190.0	190.0	199.0	199.0	190.0	100.0	100.0	100.0	100.0	100.0
RATES PER 1,000 POPULATION										
Under 5 years.....	28.9	22.7	26.8	21.2	20.0	15.5	9.4	7.3	9.3	7.6
5 — 9 “.....	3.1	2.7	2.2	1.7	1.7	1.3	0.8	0.5	0.8	0.5
10 — 14 “.....	2.1	1.9	1.5	1.5	1.4	1.0	0.7	0.4	0.6	0.4
15 — 19 “.....	3.1	2.7	2.5	2.2	2.0	1.5	1.3	0.6	1.2	0.5
20 — 24 “.....	3.7	3.7	3.2	3.2	2.6	2.0	1.7	0.6	1.7	0.6
25 — 29 “.....	4.0	4.1	3.4	3.8	2.7	2.5	1.6	0.8	1.6	0.8
30 — 34 “.....	3.8	4.5	3.5	4.2	2.8	2.8	1.8	1.1	1.8	1.0
35 — 39 “.....	4.7	5.5	4.2	4.8	3.8	3.4	2.2	1.5	2.3	1.5
40 — 44 “.....	5.6	5.9	5.4	5.0	5.0	4.5	3.5	2.3	3.4	2.4
45 — 49 “.....	7.3	7.1	7.2	6.6	7.3	6.0	5.7	3.7	5.8	3.7
50 — 54 “.....	9.8	10.2	10.7	9.0	10.6	8.1	9.8	5.6	9.6	5.7
55 — 59 “.....	15.2	13.5	15.4	13.4	16.0	12.3	15.1	9.0	15.5	8.8
60 — 64 “.....	21.9	19.7	22.9	20.7	24.2	18.5	23.9	14.2	24.0	14.8
65 — 69 “.....	33.4	33.2	35.2	30.3	37.3	30.4	35.9	22.6	35.7	22.3
70 — 74 “.....	56.9	52.8	55.0	49.1	58.5	47.0	53.2	37.2	53.4	37.0
75 — 79 “.....	89.4	80.9	87.4	82.9	95.7	79.7	84.8	65.4	82.8	66.8
80 — 84 “.....	133.8	122.4	134.1	127.1	147.6	131.2	132.4	107.0	132.6	110.5
85 years or over.....	228.2	224.9	228.1	212.6	241.9	229.3	219.9	203.9	221.9	198.3
Totals, All Ages.....	10.9	10.2	10.5	9.6	10.8	9.1	9.4	6.9	9.4	7.0
Average age at death.....	39.0	41.1	43.1	44.8	51.5	53.4	57.9	60.5	58.0	60.6

¹ Excludes Quebec and the Yukon and Northwest Territories.² Excludes the Yukon and Northwest Territories.

Deaths in Urban Centres.—For convenient reference Table 2, pp. 199-200 shows the number of deaths and death rates in 1956 for urban centres of 10,000 population or over. Without a knowledge of the age composition of each centre it is difficult to compare rates for various centres. The migration of young people from rural areas to some urban centres and of older people to other centres creates a favourable situation for a low or high rate as the case may be. Despite differences in the age factor, some urban areas have very low death rates compared with other centres of the same size and with other areas in the same province.

Causes of Death.—Table 14 shows the deaths in Canada grouped according to the International Abbreviated List of 50 Causes. About 80 p.c. of the deaths are caused by diseases of the heart and arteries, cancer, accidents, diseases of early infancy, the respiratory diseases—tuberculosis, pneumonia and influenza—and nephritis.

The rise in the average age at death has already been noted (p. 210). Causes of death that mainly affect children and young adults have declined. Diphtheria for example has been almost wiped out and tuberculosis has been greatly reduced. On the other hand the aging of the population increases the proportion of deaths from certain causes that affect older people. Thus cancer and diseases of the cardio-vascular-renal systems now account for a substantially larger proportion of all deaths than formerly.

These trends indicate the remarkable success that has attended the attack by health authorities on the infective and contagious diseases which in the past have constituted such a great hazard in the early and young adult years of life. They have similarly served to emphasize the emergence of the chronic and degenerative conditions of later life as the targets towards which the public health programs of the future will be directed. In effect, Canada has shared the experience of most western nations in exchanging a high mortality in younger life for high morbidity in older age groups.

The Chart on p. 213 shows death rates for the major cause groups from 1931-56.

14.—Deaths and Rates per 100,000 Population according to the International Abbreviated List of 50 Causes 1954-56

International List No.		Cause of Death	Numbers of Deaths			Rates per 100,000 Population		
Abbreviated List	Detailed List		1954 ¹	1955	1956	1954 ¹	1955	1956
B 1	001-008	Tuberculosis of respiratory system..	1,299	1,223	1,079	8.6	7.8	6.7
B 2	010-019	Tuberculosis, other forms.....	263	180	177	1.7	1.1	1.1
B 3	020-029	Syphilis and its sequelæ.....	179	187	209	1.2	1.2	1.3
B 4	040	Typhoid fever.....	7	10	9	1	0.1	0.1
B 5	043	Cholera.....	—	—	—	—	—	—
B 6	045-048	Dysentery, all forms.....	27	20	29	0.2	0.1	0.2
B 7	050, 051	Scarlet fever and streptococcal sore throat.....	31	26	24	0.2	0.2	0.1
B 8	055	Diphtheria.....	18	15	8	0.1	0.1	2
B 9	056	Whooping cough.....	96	137	118	0.6	0.9	0.7
B10	057	Meningococcal infections.....	102	80	84	0.7	0.5	0.5
B11	058	Plague.....	—	—	—	—	—	—
B12	080	Acute poliomyelitis.....	157	36	51	1.0	0.2	0.3
B13	084	Smallpox.....	—	—	—	—	—	—
B14	085	Measles.....	118	179	177	0.8	1.1	1.1
B15	100-108	Typhus and other rickettsial diseases.....	—	1	1	—	2	2
B16	110-117	Malaria.....	—	—	—	—	—	—
B17	030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138	All other diseases classified as infective and parasitic.....	393	386	386	2.6	2.5	2.4
B18	140-205	Cancer (all malignant neoplasms) ² ..	19,694	20,309	20,868	129.8	129.4	129.8
		Cancer.....	18,719	19,274	19,818	123.3	122.8	123.2
	(201)	Hodgkin's disease.....	208	195	215	1.4	1.2	1.3
	(204)	Leukæmia and aleukæmia.....	767	840	835	5.1	5.4	5.2
B19	210-239	Benign and unspecified neoplasms..	366	362	356	2.4	2.3	2.2
B20	260	Diabetes mellitus.....	1,607	1,716	1,820	10.6	10.9	11.3
B21	290-293	Anæmias.....	323	334	355	2.1	2.1	2.2
B22	330-334	Vascular lesions affecting central nervous system.....	13,732	14,148	14,447	90.5	90.1	89.8

For footnotes, see end of table, p. 212.

14.—Deaths and Rates per 100,000 Population according to the International Abbreviated List of 50 Causes 1954-56—concluded

International List No.		Cause of Death	Numbers of Deaths			Rates per 100,000 Population		
Abbreviated List	Detailed List		1954 ¹	1955	1956	1954 ¹	1955	1956
B23	340	Non-meningococcal meningitis.....	273	259	242	1.8	1.6	1.5
B24	400-402	Rheumatic fever.....	202	151	110	1.3	1.0	0.7
B25	410-416	Chronic rheumatic heart disease....	1,584	1,455	1,448	10.4	9.3	9.0
B26	420-422	Arteriosclerotic and degenerative heart disease.....	33,810	35,501	36,576	222.9	226.1	227.4
B27	430-434	Other diseases of heart.....	1,860	1,924	1,913	12.3	12.3	11.9
B28	440-443	Hypertension with heart disease....	4,043	4,055	4,038	26.7	25.8	25.1
B29	444-447	Hypertension without mention of heart.....	972	1,037	959	6.4	6.6	6.0
B30	480-483	Influenza.....	518	808	612	3.4	5.1	3.8
B31	490-493	Pneumonia.....	4,391	4,785	5,158	28.9	30.5	32.1
B32	500-502	Bronchitis.....	551	545	722	3.6	3.5	4.5
B33	540, 541	Ulcer of stomach and duodenum....	749	727	779	4.9	4.6	4.8
B34	550-553	Appendicitis.....	211	213	189	1.4	1.4	1.2
B35	560, 561, 570	Intestinal obstruction and hernia....	804	823	837	5.3	5.2	5.2
B36	543, 571, 572	Gastritis, duodenitis, enteritis and colitis except diarrhoea of the newborn.....	982	964	910	6.5	6.1	5.7
B37	581	Cirrhosis of liver.....	742	757	838	4.9	4.8	5.2
B38	590-594	Nephritis and nephrosis.....	2,333	2,282	2,143	15.4	14.5	13.3
B39	610	Hyperplasia of prostate.....	635	651	632	4.2	4.1	3.9
B40	640-652, 660,	Complications of pregnancy, child- birth and the puerperium.....	312	337	278	2.1	2.1	1.7
B41	670-689		2,580	2,619	2,838	17.0	16.7	17.6
B42	750-759	Congenital malformations.....	2,893	3,027	3,192	19.0	19.3	19.8
B43	760-762	Birth injuries, postnatal asphyxia and atelectasis.....	626	667	713	4.1	4.2	4.4
B44	763-768	Infections of the newborn.....	3,601	3,435	3,649	23.7	21.9	22.7
B45	769-776	Other diseases peculiar to early infancy and immaturity (un-qualified).....	1,880	1,894	1,813	12.4	12.1	11.3
B46	780-795	Senility without mention of psych-osis, ill-defined and unknown causes.....	9,899	10,086	10,489	65.3	64.3	65.2
BE47	Residual	All other diseases.....	2,867	3,042	3,559	18.9	19.4	22.1
BE48	E810-E835	Motor vehicle accidents.....	5,513	5,808	5,712	36.3	37.0	35.5
BE49	E800-E802	All other accidents.....	1,102	1,106	1,226	7.3	7.0	7.6
BE49	E840-E962		175	169	188	1.2	1.1	1.2
BE50	E963, E970-E979	Suicide and self-inflicted injury....						
BE50	E964, E965-E980-E999	Homicide and operations of war....						
Totals, All Causes.....			124,520	128,476	131,961	820.7	818.2	820.2

¹ Excludes the Yukon and Northwest Territories.² Less than 0.1 per 100,000.³ Includes

Hodgkin's disease, leukaemia and aleukæmia.

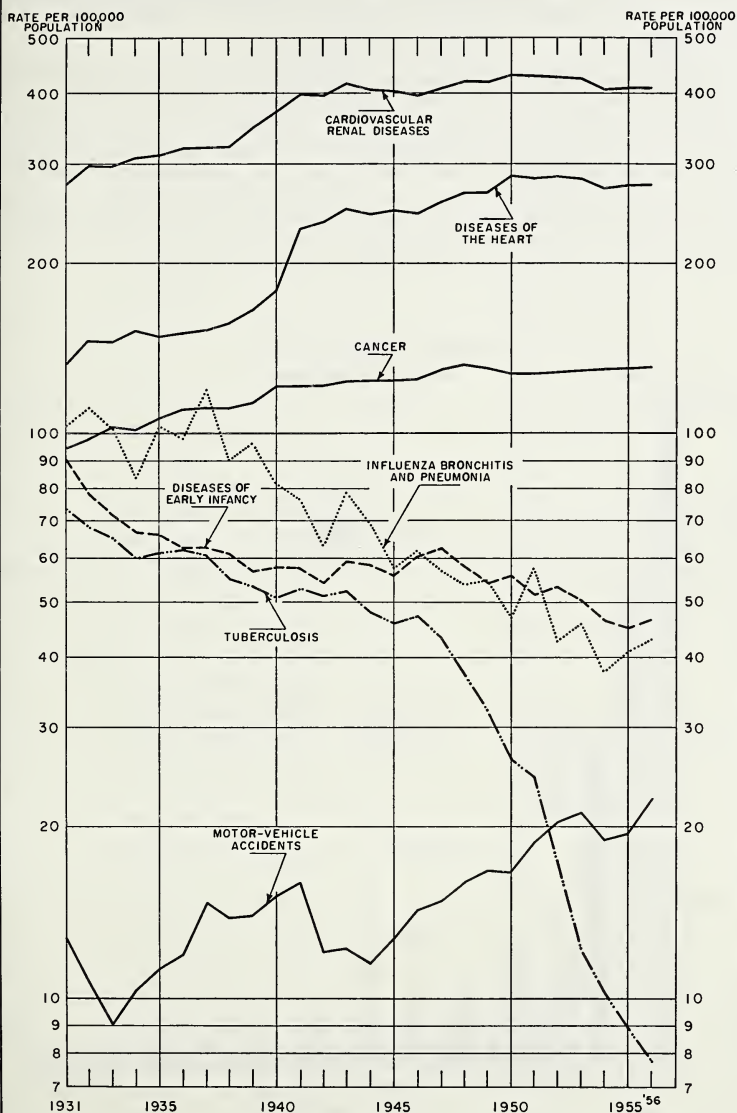
⁴ Excludes Hodgkin's disease, leukaemia and aleukæmia.

Subsection 2.—Infant Mortality

Table 1, pp. 196-198, shows the striking improvement that has taken place in the rate of infant mortality during the past 35 years. Although 42,000 of the 1,330,000 children born in the years 1954-56 died, 81,700 others lived to their first birthday who *would have* died at the rate prevailing in the period 1926-30.

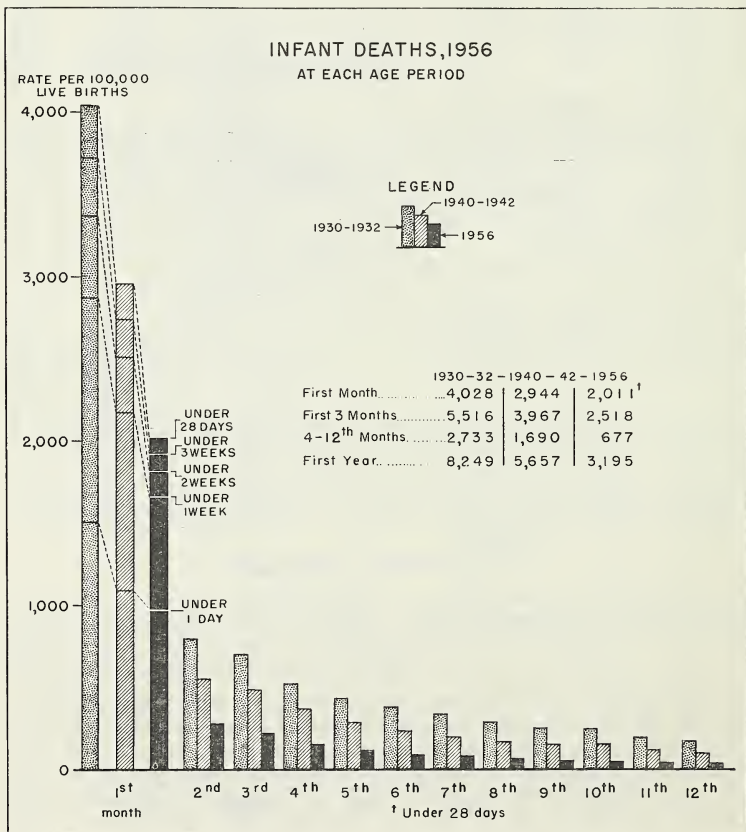
As illustrated in Table 15, mortality among male infants is 25 to 30 p.c. higher than that among females for Canada as a whole, with wider variations for the individual provinces. As pointed out earlier there were in the 1941-54 period between 1,052 and 1,067 males born to every 1,000 females born, but because male infant mortality is higher the excess of males is reduced drastically by the end of the first year. For example, in 1954-56 there were 683,247 male children born compared with 646,627 female children, an excess

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of 36,620 or 5.6 p.c.; during this period 24,099 male children died during their first year compared with 18,118 female children, that is, 5,981 more. The excess of males at one year of age was thus reduced to 30,639 or 4.9 p.c.

As indicated in Tables 1 and 15 infant mortality rates vary considerably from province to province and from one locality to another. One of the principal causes of these variations appears to be the different proportions of births that take place in hospital or under proper medical care (*see also p. 202*). Along with increased hospitalization has come better and more widespread prenatal and postnatal care. Many other factors have also been important, particularly the supervision of water supplies, improved sanitation, the pasteurization of milk, the use of antibiotics, more and better paediatric services, improved obstetrical and hospital nursing room services, improved home environment because of generally improved living standards and, in recent years, the lower age of mothers.



15.—Distribution of Infant Deaths by Sex and Province 1921-56

Province and Year	Males	Fe- males	Rate per 1,000 Male Live Births	Rate per 1,000 Female Live Births	Province and Year	Males	Fe- males	Rate per 1,000 Male Live Births	Rate per 1,000 Female Live Births	
	No.	No.				No.	No.			
Newfoundland.....1951	361	276	60	48	Manitoba—concl. 1951	369	289	36	30	
1955	357	267	48	37	1955	390	306	34	28	
1956	335	295	45	41	1956	365	311	33	29	
P. E. Island.....1921	95	85	89	78	Saskatchewan.....1921	1,048	766	90	70	
1931	78	50	78	57	1931	851	612	78	59	
1941	102	61	95	63	1941	531	415	56	46	
1951	60	30	44	23	1951	353	323	32	30	
1955	50	46	34	35	1955	426	319	34	26	
1956	60	45	46	33	1956	391	289	32	25	
Nova Scotia.....1921	738	573	110	91	Alberta.....1921	808	583	95	72	
1931	510	404	86	71	1931	675	522	76	63	
1941	545	363	77	53	1941	506	373	57	44	
1951	344	250	39	30	1951	531	358	39	27	
1955	340	226	35	25	1955	508	380	29	23	
1956	325	229	33	25	1956	508	352	28	21	
New Brunswick.....1921	740	559	125	101	British Columbia..1921	343	259	62	51	
1931	565	379	102	72	1931	292	222	55	44	
1941	515	421	83	69	1941	316	236	41	32	
1951	472	363	58	46	1951	487	352	34	26	
1955	368	254	43	31	1955	509	353	29	21	
1956	358	298	42	37	1956	509	435	28	24	
Quebec.....1931	5,417	4,026	126	99	Yukon.....1951	10	9	58	53	
1941	3,916	2,854	85	66	1955	17	10	64	39	
1951	3,335	2,486	54	42	1956	11	12	42	55	
1955	2,896	2,150	42	33	Northwest Territories	1951	43	27	136	81
1956	3,130	2,414	45	37	1955	45	45	123	123	
Ontario.....1921	3,918	2,845	102	79	1956	68	49	166	131	
1931	2,744	2,089	77	62						
1941	1,910	1,384	51	40	Canada.....1921 ¹	8,558	6,335	98	77	
1951	2,010	1,535	34	28	1931 ²	11,667	8,693	94	74	
1955	2,061	1,561	29	23	1941 ²	8,788	6,448	67	52	
1956	2,048	1,562	28	22	1951	8,375	6,298	43	34	
Manitoba.....1921	868	665	92	74	1955	7,967	5,917	35	27	
1931	535	389	74	55	1956	8,108	6,291	35	29	
1941	447	341	59	47						

¹Excludes Quebec and the Yukon and Northwest Territories.

²Excludes the Yukon and Northwest Territories.

Infant Mortality in Urban Centres.—Because of the relatively small numbers of infant deaths in individual cities and towns, the rates for these centres usually vary widely from year to year. As is evident from Table 2, pp. 199-200, many cities and towns have maintained consistently low rates as compared with the national rate or the rate for the province in which they are situated.

Causes of Infant Deaths.—Of the 14,399 infant deaths in 1956 a congenital malformation was the underlying cause of death in 2,310 cases, immaturity in 2,224, pneumonia among infants over four weeks of age 1,600, postnatal asphyxia and atelectasis 1,642, and injury at birth 1,548; these causes together made up almost 65 p.c. of the total. The Chart opposite shows the relative importance of the major causes of infant deaths from 1931-56, and the Chart on p. 214 shows the comparative numbers of children dying at each month of age during the first year of life.

16.—Infant Mortality and Rates per 100,000 Live Births by Cause 1954-56

Inter- national List No.	Cause of Death	Numbers of Deaths			Rates per 100,000 Live Births		
		1954 ¹	1955 ¹	1956	1954 ¹	1955 ¹	1956
001-019	Tuberculosis.....	42	21	18	10	5	4
020-029	Syphilis.....	6	5	6	1	1	1
045-048	Dysentery.....	12	11	22	3	2	5
050	Scarlet fever.....	2	1	1	2	2	2
052	Erysipelas.....	1	1	1	2	2	2
055	Diphtheria.....	1	1	—	2	2	—
056	Whooping cough.....	75	107	93	17	24	21
057	Meningococcal infections.....	50	42	38	11	10	8
085	Measles.....	56	66	72	13	15	16
140-239	Neoplasms.....	35	40	41	8	9	9
273	Diseases of thymus gland.....	37	38	33	9	9	7
325	Mental deficiency.....	24	17	44	6	4	10
340	Meningitis (non-meningococcal).....	138	142	140	32	32	31
391, 392	Otitis media.....	200	151	122	46	34	27
470-475	Acute upper respiratory infections.....	77	66	67	18	15	15
480-483	Influenza.....	172	210	168	40	48	37
490-493	Pneumonia (4 weeks and over).....	1,577	1,567	1,600	362	355	355
500-502	Bronchitis.....	123	100	152	28	23	34
543	Gastritis and duodenitis.....	5	5	3	1	1	1
560-570	Hernia and intestinal obstruction.....	86	92	135	20	21	30
571	Gastro-enteritis and colitis.....	542	490	484	125	111	107
572	Chronic enteritis, and ulcerative colitis.....	7	3	4	2	1	1
750-759	Congenital malformations.....	2,137	2,165	2,310	491	490	512
760, 761	Injury at birth.....	1,386	1,426	1,548	319	323	343
762	Post-natal asphyxia and atelectasis.....	1,507	1,594	1,642	346	361	364
763	Pneumonia of newborn (under 4 weeks).....	438	481	512	101	109	114
764	Diarrhoea of newborn (under 4 weeks).....	137	134	149	31	30	33
765-768	Other infections of the newborn.....	51	41	52	12	9	12
769	Antenatal toxæmia.....	146	170	137	34	38	30
770	Erythroblastosis.....	365	343	334	84	78	74
771	Hæmorrhagic disease of newborn.....	136	117	109	31	26	24
772	Nutritional maladjustment.....	112	107	93	26	24	21
773	Ill-defined diseases peculiar to early infancy.....	777	703	748	179	159	166
774-776	Immaturity.....	2,062	1,979	2,224	474	448	493
795	Ill-defined and unknown causes.....	192	238	215	44	54	48
E810-E825	Motor vehicle traffic accidents.....	12	12	19	3	3	4
E900-E904	Accidental falls.....	14	17	15	3	4	3
E916	Accidents caused by fire.....	25	36	27	6	8	6
E921, E922	Inhalation and ingestion of food or other object.....	248	249	237	57	56	53
E924, E925	Accidental mechanical suffocation.....	128	116	156	29	26	35
	Other accidental and violent deaths.....	56	71	49	13	16	11
	Other specified causes.....	644	592	579	148	134	128
Totals, All Causes.....		13,841	13,767	14,399	3,183	3,116	3,193

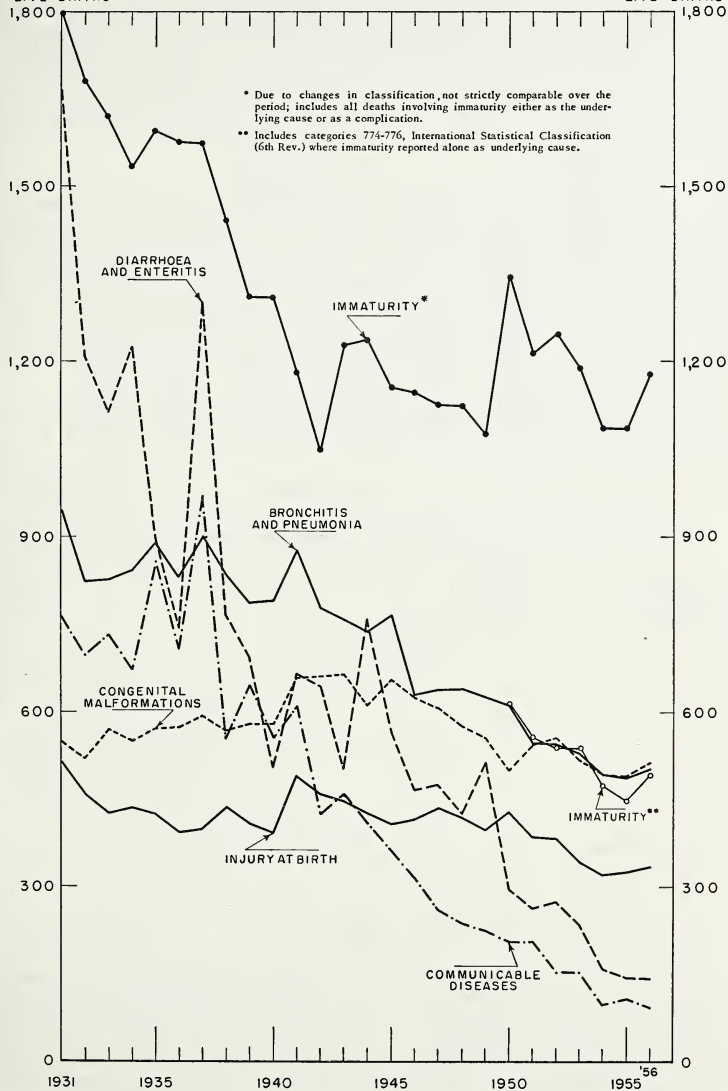
¹ Excludes the Yukon and Northwest Territories.

² Less than one per 100,000 live births.

LEADING CAUSES OF INFANT DEATHS

RATE PER 100,000
LIVE BIRTHS

RATE PER 100,000
LIVE BIRTHS



Subsection 3.—Maternal Mortality

As indicated in Table 1, pp. 196-198, the number of mothers who die in pregnancy and childbirth has been greatly reduced during the past two decades. Although the number of births has been much greater in recent years, the number of maternal deaths has declined steadily since about 1930 (when there were 1,215 deaths and a rate of almost five deaths for every 1,000 live births) to a record low of 278 in 1956. Since 1945 the rate of maternal mortality has dropped below two per 1,000 live births and has been under one per 1,000 live births since 1951. Mortality among unmarried mothers is higher than among married mothers.

Age at Death.—Table 17 shows the distribution of maternal deaths by age groups and average age at death. The latter is about four years higher than the average age of all mothers at the time of childbirth. The rates per 1,000 live births by age groups show that age is a most important factor in maternal mortality. Though all the rates have shown a declining tendency, the inequalities between the age groups remain. The death rate for mothers 30-34 years of age is twice to three times as high as the rate at 20-24 years, and at 40-44 years it is five to ten times as high. The higher rate for the "under 20" age group, compared with the age group 20-24, is caused by the high proportion of illegitimate children born to young mothers in the "under 20" group.

17.—Maternal Mortality and Rates per 1,000 Live Births by Age Group 1954-56

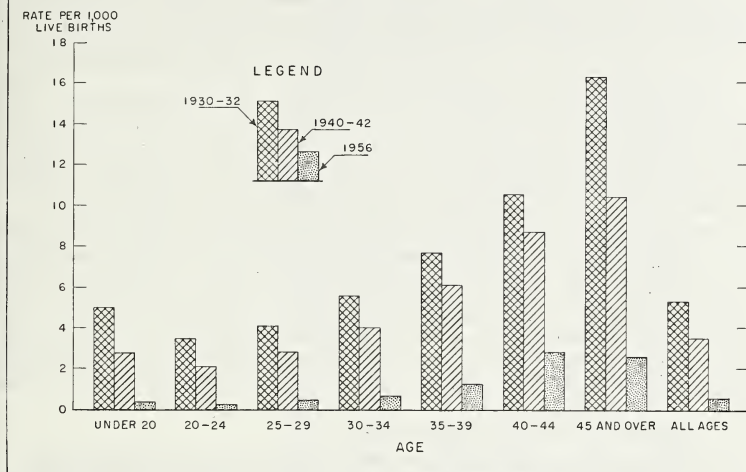
Age Group	Maternal Deaths						Rates per 1,000 Live Births		
	1954 ¹		1955 ¹		1956 ²		1954 ¹	1955 ¹	1956 ²
	No.	p.c.	No.	p.c.	No.	p.c.			
Under 20 years.....	11	3.8	13	4.2	12	4.7	0.38	0.44	0.38
20 — 24 ".....	37	12.8	47	15.4	29	11.4	0.32	0.40	0.24
25 — 29 ".....	68	23.4	62	20.3	59	23.1	0.55	0.50	0.46
30 — 34 ".....	66	22.8	76	24.8	59	23.1	0.74	0.85	0.65
35 — 39 ".....	69	23.8	74	24.2	56	22.1	1.49	1.54	1.14
40 — 44 ".....	33	11.4	29	9.5	38	14.9	2.21	1.89	2.51
45 — 49 ".....	6	2.0	4	1.3	2	0.8	5.09	3.54	1.73
50 years or over.....	—	—	1	0.3	—	—	—	—	—
Totals, All Ages.....	290	100.0	306	100.0	255	100.0	0.69	0.72	0.58
Average age at death.....	32.2		31.8		32.3		...	....	...

¹ Excludes Newfoundland and the Yukon and Northwest Territories.

² Excludes Newfoundland.

Causes of Maternal Deaths.—Table 18 shows the number and rate of maternal deaths by causes. Until a decade ago puerperal sepsis and toxæmias of pregnancy were by far the most important causes. Since 1936 the rate for puerperal sepsis has been reduced by almost 95 p.c. largely as a result of the use of sulpha and other antibiotics. Although there has been a reduction of over 70 p.c. since 1936 in the maternal death rate from toxæmias of pregnancy this group still remains a major cause of maternal deaths second only to complications of delivery.

MATERNAL DEATHS, 1956



18.—Maternal Mortality and Rates per 100,000 Live Births by Cause 1954-56

International List No.	Cause of Death	Numbers of Deaths			Rates per 100,000 Live Births		
		1954 ¹	1955 ¹	1956	1954 ¹	1955 ¹	1956
640, 641	Infections of the genito-urinary tract during pregnancy.....	1	—	1	²	—	²
642	Toxæmias of pregnancy.....	77	93	53	18	21	12
643	Placenta prævia noted before delivery.....	2	4	—	²	1	—
644	Other hæmorrhage of pregnancy.....	6	8	4	1	2	1
645	Ectopic pregnancy.....	11	11	10	3	2	2
646-649	Other complications of pregnancy.....	11	23	12	3	5	3
650, 652	Abortion without mention of sepsis.....	17	13	11	4	3	2
651	Abortion with sepsis.....	24	15	14	6	3	3
660	Delivery without complication.....	8	4	7	2	1	2
670	Delivery complicated by placenta prævia or antepartum hæmorrhage.....	24	20	26	6	5	6
671	Delivery complicated by retained placenta.....	8	8	8	2	2	2
672	Delivery complicated by other postpartum hæmorrhage.....	32	32	29	7	7	6
673, 674	Delivery complicated by abnormality of bony pelvis or malposition of foetus.....	11	7	9	3	2	2
675	Delivery complicated by prolonged labour of other origin.....	6	5	11	1	1	2
676, 677	Delivery with laceration or other trauma.....	18	15	21	4	3	5
678	Delivery with other complications of childbirth.....	15	20	21	3	5	5
681	Sepsis of childbirth and the puerperium.....	8	8	9	2	2	2
682-684	Puerperal phlebitis, thrombosis, pyrexia, pulmonary embolism.....	21	29	19	5	7	4
685, 686	Puerperal eclampsia and toxæmia.....	6	8	5	1	2	1
687-689	Other and unspecified complications of the puerperium.....	6	12	8	1	3	2
Totals, All Puerperal Causes.....		312	335	278	72	76	62

¹ Excludes the Yukon and Northwest Territories.² Less than one per 100,000 live births.

Section 4.—Natural Increase*

As will be observed from Table 1 the rate of natural increase in Canada (excess of births over deaths) in 1926-30 was 13 per 1,000 population. Partly as a result of the depression the birth rate declined more than the death rate and the rate of natural increase fell to 9.7 in 1937. It increased steadily from 12.6 in 1940-42 to 19.3 in 1947, dropped to 17.8 in 1948, then rose to a high of 20.3 in 1954. A decrease to 20.0 in 1955 and 19.8 in 1956 was caused mainly by a drop in the birth rate.

Table 19 shows that the rates of natural increase in the provinces followed generally the rate for Canada as a whole. The high rates in the Prairie Provinces are caused by their relatively younger populations and consequent low death rates. In Quebec the death rate in the period 1926-30 was high but it has since declined steadily. High birth rates have given Newfoundland, New Brunswick and Alberta the highest rates of natural increase in Canada in recent years (excluding the Yukon and Northwest Territories).

The rates of natural increase are higher for females than for males in all provinces because of the higher death rates for males. In the western provinces particularly, the ratio of males to females in the total population is higher than in other parts of Canada and this tends to lower the rate of natural increase. In Canada, a country with a fairly young population and where immigration has been on a large scale, an excess of males is to be expected but the higher rate of natural increase for females may gradually reduce this excess. The trend is towards an eventual excess of females in the total population—as there now is in most European countries—unless immigration again raises the male ratio.

* For international comparisons, see Section 7, pp. 230-231.

19.—Natural Increase and Rates per 1,000 Population by Sex and Province 1921-56

Province and Year	Excess of Births Over Deaths	Rate per 1,000 Population	Males		Females	
			Number	Rate per 1,000 Males	Number	Rate per 1,000 Females
Newfoundland.....1951	8,734	24.2	4,369	23.6	4,365	24.8
.....1952	9,788	26.2	4,942	25.7	4,846	26.7
.....1953	10,064	26.3	4,990	25.4	5,074	27.3
.....1954	10,737	27.2	5,330	26.2	5,407	28.3
.....1955	11,551	28.4	5,701	27.3	5,850	29.7
.....1956	11,483	27.6	5,722	26.8	5,761	28.6
Prince Edward Island.....1921	947	10.7	454	10.1	493	11.3
.....1931	967	10.9	517	11.4	450	10.6
.....1941	915	9.6	483	9.8	432	9.4
.....1951	1,747	17.9	872	17.4	875	18.2
.....1952	1,787	17.8	902	17.7	885	18.1
.....1953	1,811	17.9	853	16.6	958	19.4
.....1954	1,758	17.4	874	17.0	884	17.8
.....1955	1,883	18.8	949	18.6	934	19.0
.....1956	1,724	17.4	765	15.1	959	19.7
Nova Scotia.....1921	6,601	12.6	3,323	12.5	3,278	12.7
.....1931	5,647	11.0	2,836	10.8	2,811	11.3
.....1941	6,989	12.1	3,335	11.3	3,654	13.0
.....1951	11,313	17.6	5,596	17.2	5,717	18.0
.....1952	12,195	18.7	6,022	18.2	6,173	19.1
.....1953	12,468	18.8	6,146	18.3	6,322	19.4
.....1954	13,217	19.6	6,490	18.9	6,727	20.4
.....1955	13,027	19.1	6,375	18.4	6,652	19.8
.....1956	13,368	19.2	6,719	19.0	6,649	19.5
New Brunswick.....1921	6,055	15.9	3,084	16.0	2,971	15.9
.....1931	6,157	15.1	3,099	14.9	3,058	15.3
.....1941	7,088	15.5	3,396	14.5	3,692	16.5
.....1951	11,202	21.8	5,522	21.3	5,680	22.1
.....1952	12,044	22.9	5,768	21.8	6,276	24.0
.....1953	11,821	22.2	5,966	22.3	5,855	22.1
.....1954	12,363	22.9	6,140	22.6	6,223	23.2
.....1955	12,174	22.3	5,898	21.4	6,276	23.1
.....1956	11,915	21.5	6,014	21.5	5,901	21.5

19.—Natural Increase and Rates per 1,000 Population by Sex and Province 1921-56—concluded

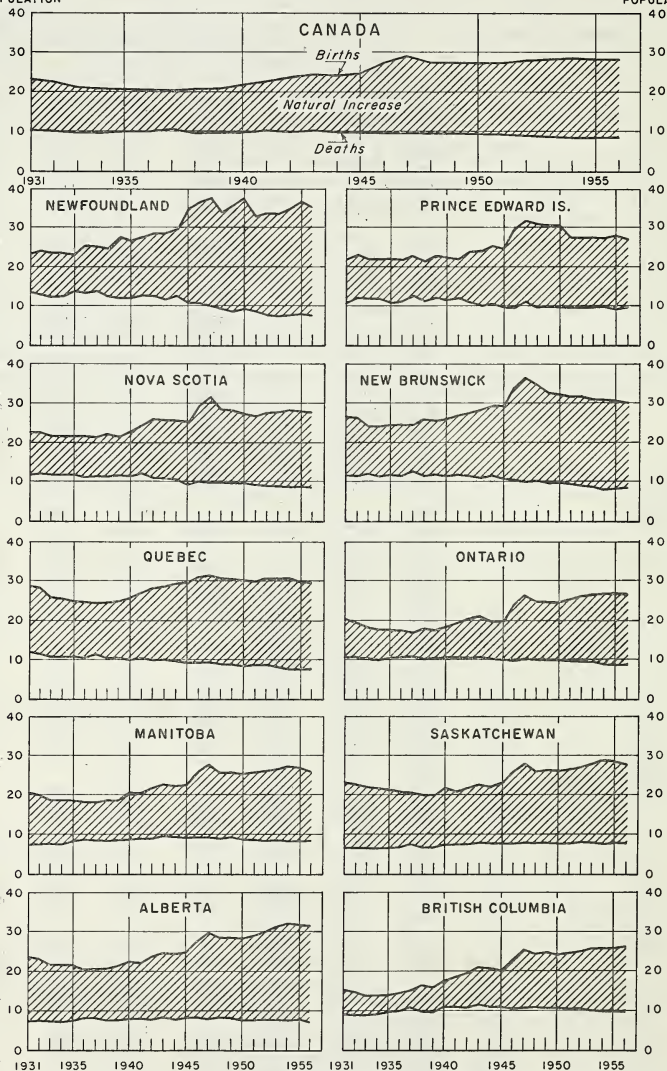
Province and Year	Excess of Births Over Deaths	Rate per 1,000 Population	Males		Females		
			Number	Rate per 1,000 Males	Number	Rate per 1,000 Females	
Quebec.....	1921	55,316	23.4	29,431	24.9	25,885	21.9
	1931	49,119	17.1	24,984	17.3	24,135	16.9
	1941	54,871	16.5	27,561	16.5	27,310	16.5
	1951	86,030	21.2	42,961	21.2	43,069	21.2
	1952	91,562	21.9	45,555	21.8	46,007	22.0
	1953	94,250	22.1	46,636	21.8	47,614	22.3
	1954	100,009	22.8	49,865	22.7	50,144	22.9
	1955	99,420	22.0	49,469	21.9	49,951	22.1
	1956	100,842	21.8	50,220	21.7	50,622	21.9
Ontario.....	1921	39,601	13.5	20,245	13.7	19,356	13.3
	1931	33,504	9.8	16,472	9.4	17,032	10.1
	1941	33,036	8.7	15,705	8.2	17,331	9.3
	1951	70,846	15.4	34,737	15.0	36,109	15.8
	1952	79,489	16.6	38,914	16.1	40,575	17.1
	1953	84,529	17.1	41,167	16.5	43,362	17.7
	1954	91,746	17.9	44,736	17.3	47,010	18.5
	1955	94,120	17.9	45,842	17.3	48,278	18.5
	1956	96,285	17.9	46,813	17.2	49,472	18.4
Manitoba.....	1921	13,090	21.5	6,491	20.2	6,599	22.8
	1931	9,057	12.9	4,239	11.5	4,818	14.5
	1941	8,317	11.4	3,834	10.1	4,483	12.7
	1951	13,207	17.0	6,388	16.2	6,819	17.9
	1952	14,225	17.8	6,713	16.5	7,512	19.1
	1953	14,227	17.6	6,576	16.0	7,651	19.2
	1954	15,529	18.8	7,266	17.4	8,263	20.4
	1955	15,544	18.5	7,388	17.3	8,156	19.7
	1956	14,887	17.5	6,929	16.0	7,958	19.1
Saskatchewan.....	1921	16,897	22.3	8,542	20.6	8,355	24.3
	1931	15,265	16.5	7,499	15.0	7,766	18.4
	1941	12,006	13.4	5,651	11.8	6,355	15.2
	1951	15,293	18.4	7,192	16.6	8,101	20.4
	1952	15,980	18.9	7,559	17.2	8,421	20.9
	1953	17,016	19.7	8,012	17.9	9,004	21.8
	1954	18,658	21.4	8,913	19.6	9,745	23.3
	1955	18,085	20.6	8,513	18.6	9,572	22.7
	1956	17,393	19.7	8,251	18.0	9,142	21.7
Alberta.....	1921	11,621	19.7	5,635	17.4	5,986	22.6
	1931	11,950	16.4	5,843	14.6	6,107	18.4
	1941	10,923	13.7	5,016	11.8	5,907	16.0
	1951	19,836	21.2	9,331	19.0	10,505	23.5
	1952	21,760	22.4	10,408	20.4	11,352	24.5
	1953	23,730	23.4	11,383	21.5	12,347	25.6
	1954	26,073	24.7	12,616	22.9	13,457	26.7
	1955	26,401	24.2	12,615	22.2	13,786	26.4
	1956	27,165	24.2	13,069	22.3	14,096	26.2
British Columbia.....	1921	6,445	12.3	2,949	10.1	3,496	15.1
	1931	4,290	6.2	1,604	4.2	2,686	8.7
	1941	6,533	8.0	2,342	5.4	4,191	10.9
	1951	16,439	14.1	7,107	11.9	9,332	16.4
	1955	21,322	15.9	9,298	13.4	12,024	18.5
	1956	22,826	16.3	10,183	14.1	12,643	18.6
Yukon.....	1951	257	28.6	115	20.9	142	39.4
	1955	452	41.1	215	34.1	237	50.4
	1956	396	33.0	200	29.0	196	37.0
Northwest Territories.....	1951	365	22.8	164	18.2	201	28.7
	1955	482	26.8	236	22.7	246	32.4
	1956	494	26.0	236	21.1	258	31.9
Canada.....	1921	156,573	17.8	80,154	17.7	76,419	18.0
	1931	135,956	13.1	67,093	12.5	68,863	13.8
	1941	140,678	12.2	67,323	11.4	73,355	13.1
	1951	255,269	18.2	124,354	17.5	130,915	18.9
	1955	314,461	20.0	152,499	19.2	161,962	20.9
	1956	318,778	19.8	155,121	19.0	163,657	20.6

¹ Excludes Newfoundland and the Yukon and Northwest Territories.

BIRTH, DEATH AND NATURAL INCREASE RATES

RATE PER 1,000
POPULATION

RATE PER 1,000
POPULATION



Natural Increase in Urban Centres.—The classification of births and deaths by place of residence makes it possible to compile the natural increase in the population of urban centres; the figures are presented in Table 2, pp. 199-200.

Section 5.—Marriages and Divorces*

Subsection 1.—Marriages

Table 20 shows the number of marriages and the marriage rates per 1,000 population in Canada and the provinces, and percentages of brides and bridegrooms, according to place of birth. For the country as a whole in 1956, and as has been the case for several years, 83 p.c. of the grooms were born in Canada—nearly 68 p.c. in the province in which they were married; over 87 p.c. of the brides were born in Canada—nearly 75 p.c. in the province in which they were married. However there are wide variations from this pattern as between provinces; as might be expected, in the older Atlantic Provinces and Quebec there is a greater tendency than in the other provinces to marry native Canadians, both partners often being born in the same province.

* For international comparisons, see Section 7, pp. 230-231.

20.—Marriages and Marriage Rates by Province with Percentage Distribution of Bridegrooms and Brides by Nativity 1921-56

Province and Year	Total Marriages	Rate per 1,000 Population	Born in Province Where Married		Born in Other Provinces		Born Outside Canada		
			Grooms	Brides	Grooms	Brides	Grooms	Brides	
			No.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland.....	1951	2,517	7.0	85.2	96.7	2.4	1.9	12.4	1.4
	1952	2,730	7.3	87.5	97.0	2.1	1.0	10.3	2.1
	1953	2,771	7.2	86.5	96.4	2.5	1.5	11.1	2.1
	1954	2,952	7.5	85.1	96.0	3.3	1.6	11.5	2.4
	1955	3,211	7.9	85.3	96.4	2.4	1.7	12.3	2.0
	1956	3,073	7.4	84.3	96.4	3.3	1.6	12.4	2.0
Prince Edward Island.....	1921	518	5.8	92.3	94.6	5.0	1.9	2.7	3.5
	1931	490	5.6	89.4	91.8	5.1	4.1	5.5	4.1
	1941	673	7.1	78.8	86.6	15.0	9.4	6.2	4.0
	1951	583	5.9	82.3	91.1	12.9	6.0	4.8	2.9
	1952	613	6.1	81.4	91.5	13.9	5.4	4.7	3.1
	1953	647	6.4	80.4	91.8	15.3	6.0	4.3	2.2
	1954	605	6.0	79.2	90.7	16.7	6.8	4.1	2.5
	1955	667	6.7	82.6	94.5	12.9	4.3	4.5	1.2
	1956	649	6.6	80.7	92.8	14.8	4.8	4.5	2.5
Nova Scotia.....	1921	3,550	6.8	76.3	81.3	6.4	4.5	17.3	14.2
	1931	3,394	6.6	80.3	86.7	5.4	3.6	14.3	9.7
	1941	6,596	11.4	73.2	83.8	16.8	9.5	10.0	6.7
	1951	5,094	7.9	78.2	86.7	15.9	9.0	6.0	4.3
	1952	5,390	8.3	77.2	86.3	16.5	10.0	6.3	3.7
	1953	5,378	8.1	75.8	86.6	18.7	9.6	5.5	3.7
	1954	5,265	7.8	73.9	86.5	20.1	9.7	5.9	3.8
	1955	5,288	7.7	72.6	86.0	20.9	10.2	6.5	3.7
	1956	5,543	8.0	74.8	88.1	18.9	9.1	6.4	2.9
New Brunswick.....	1921	3,173	8.4	73.4	78.0	10.1	8.4	16.5	13.6
	1931	2,544	6.2	77.7	81.8	10.1	9.2	12.2	9.0
	1941	4,941	10.8	78.5	84.4	13.3	9.7	8.2	5.9
	1951	4,386	8.5	80.0	86.9	10.1	6.7	9.8	6.4
	1952	4,276	8.1	78.7	85.2	10.7	7.5	10.6	7.3
	1953	4,232	7.9	74.8	85.3	12.6	7.2	12.6	7.5
	1954	4,278	7.9	76.8	85.4	11.8	7.2	11.4	7.4
	1955	4,359	8.0	74.8	86.1	12.8	6.9	12.3	7.0
	1956	4,591	8.3	75.9	86.8	12.2	6.3	11.9	6.9
Quebec.....	1931	16,783	5.8	79.7	83.4	4.2	3.7	16.0	13.0
	1941	32,782	9.8	86.1	89.3	6.7	5.9	7.2	4.8
	1951	35,704	8.8	86.7	89.5	6.1	5.5	7.2	5.0
	1952	35,374	8.5	84.9	87.9	6.1	5.6	9.1	6.4
	1953	35,968	8.4	85.6	89.0	5.6	5.0	8.8	5.9
	1954	35,516	8.1	85.4	89.6	5.9	4.4	8.7	6.0
	1955	35,356	7.8	85.2	88.6	5.8	5.2	9.0	6.2
	1956	37,290	8.1	85.6	88.8	5.7	5.0	8.7	6.2

**20.—Marriages and Marriage Rates by Province with Percentage Distribution of
Bridegrooms and Brides by Nativity 1921-56—concluded**

Province and Year	Total Marriages	Rate per 1,000 Popu- lation	Born in Province Where Married		Born in Other Provinces		Born Outside Canada		
			Grooms	Brides	Grooms	Brides	Grooms	Brides	
			No.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
Ontario.....	1921	24,871	8.5	63.6	66.7	5.6	4.7	30.8	28.6
	1931	23,771	6.9	57.4	63.4	7.7	7.7	34.9	28.8
	1941	43,270	11.4	89.2	89.0	4.2	4.5	6.7	6.5
	1951	45,198	9.8	65.9	72.4	14.6	12.2	19.5	15.4
	1952	45,251	9.5	63.6	70.0	14.4	12.2	22.0	17.8
	1953	45,954	9.3	63.0	69.5	14.1	11.9	22.9	18.6
	1954	45,028	8.8	61.8	68.2	14.1	12.0	24.1	19.8
	1955	44,634	8.5	62.0	68.4	13.9	11.9	24.1	19.8
	1956	46,282	8.6	61.9	68.1	14.0	12.2	24.2	19.8
Manitoba.....	1921	5,310	8.7	26.4	37.2	18.1	14.1	55.5	48.7
	1931	4,888	7.0	41.6	55.7	10.9	9.2	47.5	35.1
	1941	8,305	11.4	63.0	73.7	17.4	15.0	19.6	11.4
	1951	7,366	9.5	67.9	75.1	15.4	13.3	16.8	11.6
	1952	7,128	8.9	64.7	74.3	18.1	13.8	17.3	11.9
	1953	7,277	9.0	65.3	74.7	17.9	13.6	16.8	11.7
	1954	6,837	8.3	65.3	74.7	17.6	13.5	17.1	11.8
	1955	6,913	8.2	64.9	74.9	18.5	13.0	16.6	12.1
	1956	6,709	7.9	64.7	74.9	19.7	14.4	15.6	10.7
Saskatchewan.....	1921	5,101	6.7	7.1	15.6	31.4	28.1	61.5	56.3
	1931	5,700	6.2	27.6	48.3	22.5	16.9	49.9	34.7
	1941	7,036	7.9	64.7	79.1	16.1	10.0	19.1	10.9
	1951	6,805	8.2	78.3	86.4	10.7	6.4	11.1	7.2
	1952	6,944	8.2	77.6	87.4	12.0	5.9	10.4	6.6
	1953	7,186	8.3	76.9	87.1	12.6	6.0	10.4	6.8
	1954	6,953	8.0	76.9	87.3	12.8	6.0	10.3	6.7
	1955	6,494	7.4	77.6	87.5	12.3	6.1	10.2	6.4
	1956	6,403	7.3	76.5	87.9	13.7	5.4	9.8	6.7
Alberta.....	1921	4,661	7.9	7.0	14.2	26.2	25.1	66.8	60.7
	1931	5,142	7.0	22.1	38.5	19.4	17.6	58.5	43.9
	1941	8,470	10.6	50.0	63.4	23.9	19.9	26.2	16.8
	1951	9,305	9.9	56.0	67.4	25.7	19.6	18.3	13.0
	1952	9,514	9.8	53.4	65.2	26.0	19.8	20.5	15.0
	1953	10,126	10.0	53.2	63.9	26.0	20.7	20.7	15.4
	1954	9,960	9.4	53.3	63.6	25.4	19.6	21.4	16.8
	1955	9,844	9.0	51.8	63.6	26.3	20.1	21.9	16.2
	1956	9,965	8.9	53.7	63.9	25.9	20.6	20.4	15.5
British Columbia.....	1921	3,889	7.4	13.7	18.3	22.6	20.5	63.7	61.2
	1931	3,879	5.6	22.2	30.6	21.1	24.7	56.7	44.7
	1941	9,769	11.9	35.9	43.5	35.6	37.1	28.5	19.4
	1951	11,272	9.7	35.5	41.6	43.1	43.0	21.3	15.5
	1952	11,081	9.2	34.9	40.0	41.6	42.4	23.4	17.5
	1953	11,298	9.1	34.3	41.4	41.1	40.6	24.6	18.0
	1954	10,991	8.5	33.7	41.5	42.0	40.2	24.3	18.3
	1955	11,011	8.2	34.7	41.5	40.6	39.8	24.7	18.7
	1956	11,950	8.5	33.7	41.2	40.9	38.9	25.4	19.9
Yukon.....	1956	112	9.3	17.0	25.0	58.0	58.0	25.0	17.0
Northwest Territories.....	1956	146	7.7	65.1	73.3	19.9	19.2	15.1	7.5
Canada.....	1921 ¹	51,073	8.0	46.9	52.0	13.0	11.3	40.1	36.7
	1931	66,591	6.4	56.7	64.9	10.0	9.2	33.3	26.0
	1941	121,842	10.6	76.8	81.5	11.4	10.1	11.7	8.4
	1951 ²	128,230	9.2	70.5	76.5	15.1	12.8	14.5	10.6
	1952	128,301	8.9	68.7	75.0	15.1	12.8	16.2	12.2
	1953	130,837	8.8	68.3	75.1	15.1	12.5	16.6	12.4
	1954	128,385	8.4	67.8	74.9	15.2	12.2	17.0	12.9
	1955	127,777	8.2	67.8	74.8	15.0	12.3	17.2	12.9
	1956 ²	132,713	8.3	67.8	74.7	15.2	12.4	17.0	12.9

¹ Excludes the Province of Quebec.
Territories for 1956 only.

² Newfoundland included from 1951 and the Yukon and Northwest

Age and Marital Status of Bridegrooms and Brides.—Almost 92 p.c. of the marriages in 1956 were between persons who had not previously been married; almost 5 p.c. of both brides and bridegrooms had been widowed, and well over 3 p.c. of the marriages were of divorced persons. The average age at marriage of bachelors was just over 26 and that of spinsters just under 23 years and six months. The average age of widowers and widows at the time of remarriage was double that of bachelors and spinsters. Over 90 p.c. of spinsters married in 1956 were under 30 years of age—76 p.c. under 25 years. Over 83 p.c. of bachelors were under 30 years with 55 p.c. of these under 25 years of age.

As has been the case in several other countries in recent years, couples are marrying younger than was the case a generation ago. Since 1940 the average age of men at the time of their first marriage has dropped from 28 years to just past their 26th birthday; that of girls from 24 years and eight months to 23 years and five months. Table 21 shows the age pattern at marriage for all brides and bridegrooms for the years 1955 and 1956.

21.—Brides and Bridegrooms by Age and Marital Status 1955 and 1956

Year and Age Group	BRIDES							
	Numbers				Percentages			
	Spinsters	Widows	Divorced	Total	Spinsters	Widows	Divorced	Total
1955								
Under 20 years.....	34,357	17	22	34,396	29.4	0.3	0.5	26.9
20 — 24 ".....	53,749	152	478	54,379	46.0	2.4	10.2	42.6
25 — 29 ".....	17,721	359	1,063	19,143	15.2	5.8	22.7	15.0
30 — 34 ".....	5,907	584	1,110	7,601	5.1	9.4	23.7	5.9
35 — 39 ".....	2,440	670	772	3,882	2.1	10.7	16.5	3.0
40 — 44 ".....	1,288	763	623	2,674	1.1	12.2	13.3	2.1
45 — 49 ".....	687	833	321	1,841	0.6	13.4	6.9	1.4
50 — 54 ".....	359	794	167	1,320	0.3	12.7	3.6	1.0
55 — 59 ".....	179	717	80	976	0.2	11.5	1.7	0.8
60 — 64 ".....	93	570	33	696	0.1	9.1	0.7	0.5
65 years or over.....	72	774	12	858	0.1	12.4	0.3	0.7
Ages not stated.....	11	—	—	11	—	—	—	—
Totals, All Ages.....	116,563	6,233	4,681	127,777	91.5	4.9	3.7	100.0
Average ages.....	23.5	48.5	34.9	25.1	...	...	...	...
1956								
Under 20 years.....	37,657	8	21	37,686	31.0	0.1	0.4	28.4
20 — 24 ".....	55,124	152	462	55,738	45.3	2.4	9.7	42.0
25 — 29 ".....	17,808	400	1,101	19,309	14.6	6.3	23.0	14.5
30 — 34 ".....	5,863	562	1,093	7,518	4.8	8.9	22.9	5.7
35 — 39 ".....	2,429	669	867	3,965	2.0	10.5	18.1	3.0
40 — 44 ".....	1,226	847	577	2,650	1.0	13.3	12.1	2.0
45 — 49 ".....	728	876	358	1,962	0.6	13.8	7.5	1.5
50 — 54 ".....	388	785	168	1,341	0.3	12.4	3.5	1.0
55 — 59 ".....	197	666	85	948	0.2	10.5	1.8	0.7
60 — 64 ".....	95	584	33	712	0.1	9.2	0.7	0.5
65 years or over.....	67	798	14	879	0.1	12.6	0.3	0.7
Ages not stated.....	3	2	—	5	—	—	—	—
Totals, All Ages.....	121,585	6,349	4,779	132,713	91.6	4.8	3.6	100.0
Average ages.....	23.4	48.4	35.0	25.0	...	...	...	...

21.—Brides and Bridegrooms by Age and Marital Status 1955 and 1956—concluded

Year and Age Group	BRIDEGROOMS							
	Numbers				Percentages			
	Bachelors	Widowers	Divorced	Total	Bachelors	Widowers	Divorced	Total
1955								
Under 20 years.....	6,699	1	2	6,702	5.7	--	--	5.2
20 — 24 ".....	56,315	39	160	56,514	48.1	0.6	3.5	44.2
25 — 29 ".....	34,135	177	717	35,029	29.1	2.9	15.6	27.4
30 — 34 ".....	11,385	329	1,043	12,757	9.7	5.5	22.7	10.0
35 — 39 ".....	4,157	387	869	5,413	3.5	6.4	18.9	4.2
40 — 44 ".....	2,109	498	752	3,359	1.8	8.3	16.4	2.6
45 — 49 ".....	1,082	629	496	2,207	0.9	10.5	10.8	1.7
50 — 54 ".....	653	696	288	1,637	0.6	11.6	6.3	1.3
55 — 59 ".....	318	785	161	1,264	0.3	13.1	3.5	1.0
60 — 64 ".....	176	827	55	1,058	0.2	13.8	1.2	0.8
65 years or over.....	150	1,633	43	1,826	0.1	27.2	0.9	1.4
Ages not stated.....	11	—	—	11	--	--	--	--
Totals, All Ages.....	117,190	6,001	4,586	127,777	91.7	4.7	3.6	100.0
Average ages.....	26.2	54.9	38.4	28.0	...	...	...	...
1956								
Under 20 years.....	7,486	—	2	7,488	6.1	—	--	5.6
20 — 24 ".....	58,880	39	163	59,082	48.3	0.7	3.4	44.5
25 — 29 ".....	35,552	140	813	36,505	29.1	2.4	16.8	27.5
30 — 34 ".....	11,350	286	1,070	12,706	9.3	4.9	22.1	9.6
35 — 39 ".....	4,297	388	885	5,570	3.5	6.6	18.3	4.2
40 — 44 ".....	2,031	494	731	3,256	1.7	8.4	15.1	2.5
45 — 49 ".....	1,168	640	546	2,354	1.0	12.9	11.3	1.8
50 — 54 ".....	597	676	339	1,612	0.5	11.6	7.0	1.2
55 — 59 ".....	344	792	168	1,304	0.3	13.5	3.5	1.0
60 — 64 ".....	168	805	72	1,045	0.1	13.8	1.5	0.8
65 years or over.....	154	1,587	45	1,786	0.1	27.1	0.9	1.3
Ages not stated.....	5	—	—	5	--	--	--	--
Totals, All Ages.....	122,032	5,847	4,834	132,713	92.0	4.4	3.6	100.0
Average ages.....	26.1	55.1	38.5	27.9	...	...	...	...

Religious Denominations of Brides and Bridegrooms.—The distribution of brides and bridegrooms by religious denominations is roughly the same as that for the population as a whole. Table 22 shows the very strong influence that religion has on marriage. About 71 p.c. of all marriages are between persons of the same religious denomination; in 1956 among those of Jewish faith it was over 93 p.c.; among Roman Catholics nearly 89 p.c.; United Church 62 p.c.; and Eastern Orthodox over 59 p.c.

22.—Marriages by Religious Denominations of Contracting Parties 1955 and 1956
(Exclusive of the Yukon and Northwest Territories)

Denomination of Bridegroom	Denomination of Bride										Total Marriages	P.C. of Grooms
	Angli-can	Bap-tist	East-ern Orth-odox	Jew-ish	Luth-eran	Pres-byter-ian	Roman Cath-olic ¹	United Church	Other Sects	Not Stated		
1955	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
Anglican.....	7,860	617	95	13	390	783	1,936	3,540	532	3	15,769	12.3
Baptist.....	632	2,094	17	4	116	191	435	925	297	—	4,711	3.7
Eastern Orthodox...	128	25	1,197	2	92	26	373	191	63	—	2,097	1.6
Jewish.....	32	2	7	1,428	3	5	50	29	20	—	1,576	1.2
Lutheran.....	483	129	68	4	2,870	148	818	805	282	—	5,394	4.4
Presbyterian.....	891	193	33	2	147	2,030	608	1,286	204	—	5,394	4.2
Roman Catholic ¹ ...	1,720	362	294	22	892	484	52,218	2,130	763	6	58,891	46.1
United Church.....	3,344	795	150	6	748	1,008	2,148	15,055	872	3	24,130	18.9
Others.....	634	281	59	12	326	208	991	1,024	6,041	1	9,577	7.5
Not stated.....	2	—	—	—	3	—	9	2	1	8	25	--
Totals.....	15,726	4,498	1,920	1,493	5,587	4,884	59,586	24,987	9,075	21	127,777	100.0
P.C. of brides.....	12.3	3.5	1.5	1.2	4.4	3.8	46.6	19.6	7.1	--	100.0	71.1 ²

For footnotes, see end of table.

22.—Marriages by Religious Denominations of Contracting Parties 1955 and 1956—concluded

Denomination of Bridegroom	Denomination of Bride										Total Marriages	P.C. of Grooms
	Angli-can	Bap-tist	East-ern Orth-odox	Jew-ish	Luth-eran	Pres-byter-ian	Roman Cath-olic ¹	United Church	Other Sects	Not Stated		
1956	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
Anglican.....	8,059	610	90	12	421	799	1,920	3,473	567	4	15,955	12.0
Baptist.....	655	2,166	21	3	124	154	439	977	305	—	4,844	3.6
Eastern Orthodox...	133	30	1,178	1	66	29	378	201	62	—	2,078	1.6
Jewish.....	23	5	3	1,559	13	15	50	25	18	—	1,711	1.3
Lutheran.....	496	154	67	4	2,799	185	843	850	306	—	5,704	4.3
Presbyterian.....	901	223	27	3	168	1,957	676	1,261	170	1	5,387	4.1
Roman Catholic ¹ ...	1,791	379	295	24	876	458	55,593	2,224	819	5	62,464	47.1
United Church.....	3,264	859	179	6	675	1,071	2,212	15,374	816	2	24,458	18.4
Other.....	638	275	47	15	350	195	1,029	1,144	6,392	1	10,086	7.6
Not stated.....	1	1	—	—	—	—	5	4	4	11	26	—
Totals.....	15,961	4,702	1,907	1,627	5,492	4,863	63,145	25,533	9,459	24	132,713	100.0
P.C. of brides.....	12.0	3.5	1.4	1.2	4.1	3.7	47.6	19.2	7.1	—	100.0	71.6 ²

¹ Includes Greek Catholic denomination.

² Percentage of marriages between contracting parties of the same religious denomination.

Subsection 2.—Dissolutions of Marriage (Divorces)

For many years after Confederation the number of divorces granted in Canada was small. There were fewer than 20 divorces in every year before 1900, 21 in 1903, 51 in 1909 and 60 in 1913. These numbers represent less than one per 1,000 of the yearly number of marriages.

At the end of World War I in 1918 the number of divorces increased. The generally unsettled conditions and the long separation of men on Active Service from their wives may have contributed to this increase. Changes in law and procedure may also have been a further factor—at present, Quebec and Newfoundland are the only provinces in which applicants for divorce must secure a private Act of Parliament. The number of divorces increased from 11 in 1900 to a peak of 8,199 in 1947, declining gradually to a postwar low of 5,263 in 1951. Since then the annual number has been fluctuating between 5,600 and 6,100.

23.—Dissolutions of Marriage (Divorces) by Province, Alternate Years 1916-50 and 1951-56

Note.—Figures for the years 1900-49 are given in the 1956 Year Book, p. 230.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1916.....	..	—	14	11	1	18	2	2	1	18	67
1918.....	..	—	24	10	2	10	—	1	2	65	114
1920.....	..	—	45	15	9	89	42	20	112	136	468
1922.....	..	—	35	12	6	91	97	35	129	138	543
1924.....	..	—	42	15	13	113	77	26	118	136	540
1926.....	..	—	19	12	10	111	85	50	154	167	608
1928.....	..	—	28	13	24	213	79	57	173	203	790
1930.....	..	—	19	27	41	204	114	64	151	255	875
1932.....	..	—	35	26	27	343	114	66	150	245	1,006
1934.....	..	—	33	17	38	365	126	67	170	306	1,122
1936.....	..	—	41	38	40	519	179	84	218	451	1,570
1938.....	..	2	51	39	83	824	205	126	271	625	2,226
1940.....	..	—	60	52	62	916	206	125	274	674	2,369
1942.....	..	2	70	69	71	1,185	284	209	375	824	3,089
1944.....	..	3	93	78	108	1,471	316	226	484	1,009	3,788

23.—Dissolutions of Marriage (Divorces) by Province, Alternate Years 1916-50 and 1951-56
—concluded

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1946.....	..	4	260	382	290	2,639	636	505	962	2,005	7,683
1948.....	..	49	781	211	292	3,107	477	333	651	1,683	6,881
1950.....	5	13	199	194	234	2,228	309	280	534	1,377	5,373
1951.....	4	10	187	156	289	2,102	361	226	589	1,339	5,263
1952.....	3	9	188	200	309	2,202	338	223	630	1,532	5,634
1953.....	9	15	185	181	273	2,774	374	218	603	1,478	6,110
1954.....	8	8	249	117	370	2,468	371	250	610	1,471	5,922
1955.....	1	7	253	181	396	2,509	337	237	627	1,483	6,031
1956 ¹	5	1	230	215	351	2,366	314	221	685	1,502	5,890

¹ By a new rule adopted in August 1948, a *decree nisi* became absolute at the end of three months and as a result a number of divorces did not become effective until the following year.

Section 6.—Canadian Life Tables

Three official life tables for Canada have been published: the first was calculated on the basis of the deaths of 1930-32 and the census population of 1931; the second on the basis of the deaths of 1940-42 and the census population of 1941 and the third was based on the Census of 1951 and deaths during 1950-52. In addition tables have been computed for Canada as a whole for the years 1945 and 1947 based on estimated populations by sex and age and the deaths recorded as having occurred during those years. The life table values for 1951 are given in abbreviated form in Table 24.

Life tables give a summary of the health and general conditions of survival of the population in a conventional, standard form. A hypothetical number (100,000) of births of each sex is assumed as a starting point. The life tables show how, on the basis of the mortality rates at each age in the given years, these 100,000 of each sex are reduced in number by death. For example, during the year 1951, of 100,000 males born, 4,325 died in their first year so that 95,675 survived to one year of age; 326 died in their second year so that 95,349 survived to two years of age, and so on. At 100 years of age only 90 of the original 100,000 would have survived. The probability of death at each age is the ratio between the number of deaths and the population at each age. Finally, the expectation of life is the average number of years which a person might expect to live if the mortality rates in the given years remained constant.

Mortality rates at all ages for males have been almost consistently higher than for females. Males have the highest risk of mortality as compared with females during their first year of life, from their late 'teens to early 30's and from age 50 to 65. For both boys and girls the risk of mortality drops rapidly during childhood and is lowest at about age 10, increases gradually to about age 40 for males and about 50 for females and then rises steeply with advancing age. At the mortality rates given in the 1951 Life Table (see Table 24) about 15,000 males would have died before reaching age 50 as compared with about 11,000 females; only 55,000 of the original group of 100,000 males would have survived to age 70 as compared with about 66,500 women.

By 1951 life expectancy at birth in Canada had reached a new high record of 66.3 years for males and 70.8 for females—comparable to the expectancy for other countries of the world with highly developed medical and public health care. Once a child has passed its first year of life however its life expectancy increases appreciably. At one year of age a male child at present mortality risks may, on the average, expect to live an additional 68.3 years and a female 72.3 years, representing for an infant boy a gain of two full years more than his expectation at birth and 1.5 more years for an infant girl. The expectation of life of a 15 year old boy is 55.4 more years; of a 15 year old girl 59.2 years. At 25 years of age the expectation is about 46 years for men and almost 50 for women and at age 70, 10.4 years for men and 11.6 for women.

24.—Canadian Life Table 1951

Age	Males				Females			
	Number Living at Each Age	Number Dying Between Each Age and the Next	Probability of Dying Before Reaching Next Birthday	Expectation of Life	Number Living at Each Age	Number Dying Between Each Age and the Next	Probability of Dying Before Reaching Next Birthday	Expectation of Life
At birth.....	100,000		.04325	66.33	100,000		.03423	70.83
1 year.....	95,675	4,325	.00341	68.33	96,577	3,423	.00299	72.33
2 years.....	95,349	326	.00180	67.56	96,289	288	.00154	71.55
3 ".....	95,177	172	.00159	66.68	96,141	148	.00114	70.66
4 ".....	95,026	151	.00118	65.79	96,031	110	.00092	69.74
5 ".....	94,914	112	.00101	64.86	95,943	88	.00079	68.80
10 ".....	94,480	434	.00077	60.15	95,625	318	.00052	64.02
15 ".....	94,083	397	.00112	55.39	95,363	262	.00067	59.19
20 ".....	93,437	646	.00172	50.76	94,992	371	.00091	54.41
25 ".....	92,586	851	.00182	46.20	94,527	465	.00106	49.67
30 ".....	91,752	834	.00189	41.60	93,993	534	.00129	44.94
35 ".....	90,824	928	.00227	37.00	93,311	682	.00177	40.24
40 ".....	89,649	1,175	.00328	32.45	92,354	957	.00257	35.63
45 ".....	87,877	1,772	.00524	28.05	90,959	1,395	.00387	31.14
50 ".....	85,084	2,793	.00853	23.88	88,911	2,048	.00560	26.80
55 ".....	80,762	4,322	.01348	20.02	86,027	2,884	.00834	22.61
60 ".....	74,444	6,318	.02071	16.49	81,789	4,238	.01308	18.64
65 ".....	65,815	8,629	.03004	13.31	75,525	6,264	.02040	14.97
70 ".....	55,020	10,795	.04435	10.41	66,576	8,949	.03308	11.62
75 ".....	41,835	13,185	.06938	7.89	53,950	12,626	.05567	8.73
80 ".....	26,993	14,842	.10846	5.84	37,712	16,238	.09222	6.38
85 ".....	13,510	13,483	.16353	4.27	20,768	16,944	.14637	4.57
90 ".....	4,667	8,843	.23667	3.10	7,937	12,831	.22183	3.24
95 ".....	949	3,718	.32997	2.24	1,756	6,181	.32229	2.27
100 ".....	90	859	.44550	1.60	171	1,585	.45146	1.59

Table 25 summarizes the life expectancy figures extracted from the Canadian Life Tables for 1931, 1941 and 1951. Life expectancy at birth increased for men from 60 in 1931 to over 66 years in 1951 and from 62 to 70.8 years for women during the same period. This is a gain for males of 3.4 years since 1941 compared with a gain of almost 3 years in the previous decade; females gained 4.5 years since 1941 compared with 4.2 years in the preceding decade. Thus, since 1931 a total of 6.3 years have been added to male life expectancy and female longevity has been lengthened by 8.7 years.

The increases in life expectancy have been predominantly at the younger ages, particularly in infancy, and diminish with advanced age. For example, since 1931, 2.6 years have been added to the life expectancy of a 5 year old male, 1.7 years to a 20 year old, almost 6 months to a 40 year old and barely three months to a 60 year old as compared with 6.3 years for a newborn male. During this period life expectancy for a 5 year old female gained 5.6 years; for a 20 year old 4.7 years, 2.6 years for a 40 year old and 1.5 years for a 60 year old as compared with 8.7 years for a newborn female.

Longevity has improved for both sexes, though more so and at all ages for females, but there has been only slight improvement for males beyond middle life. Briefly the rapid decline in the death rate for infants of both sexes is continuing, with slower declines with advancing age, so that relatively stationary death rates have been established from about 50 years onwards for males and up to about 80 for females.

The fact that such a pattern exists is important in interpreting the results of these life tables. The arbitrary population base of 100,000 of each sex in the tables has been subjected to the mortality rates in effect in 1950-52, and the life expectancy computed as if those death rates at each age were to prevail during their lifetime. Actually the theoretical 200,000 infants born in 1950-52 will most probably have a pattern of survival and life expectancy quite different from that of the present life table as they will spend most of their lives under conditions of public health and medical care which in all likelihood will be superior to those prevailing in 1950-52.

The improvement in life expectancy, particularly among children and adolescents is owing mainly to the substantial reduction in recent years of mortality from infectious diseases; on the other hand diseases associated with middle and old age are much less amenable to control. It is therefore unlikely that improvement in life expectancy in the future will be comparable to that of the past two decades. As approximately 12 p.c. of deaths in 1951 occurred among infants and an additional 72 p.c. among persons over 50 any additional improvement must come as the result of further declines in mortality from conditions associated with childbirth and early infancy, further control of infectious diseases, prevention of accidents, and advances in combating diseases associated with middle and old age, such as cardio-vascular-renal conditions and cancer.

25.—Expectation of Life 1931, 1941 and 1951

Age	1931		1941		1951	
	Male	Female	Male	Female	Male	Female
	yrs.	yrs.	yrs.	yrs.	yrs.	yrs.
At birth.....	60.00	62.10	62.96	66.30	66.33	70.83
1 year.....	64.69	65.71	66.14	68.73	68.33	72.33
2 years.....	64.46	65.42	65.62	68.16	67.56	71.55
3 ".....	63.84	64.75	64.88	67.38	66.68	70.66
4 ".....	63.11	63.99	64.07	66.56	65.79	69.74
5 ".....	62.30	63.17	63.22	65.69	64.86	68.80
10 ".....	57.96	58.72	58.70	61.08	60.15	64.02
15 ".....	53.41	54.15	54.06	56.36	55.39	59.19
20 ".....	49.05	49.76	49.57	51.76	50.76	54.41
25 ".....	44.83	45.54	45.18	47.26	46.20	49.67
30 ".....	40.55	41.38	40.73	42.81	41.60	44.94
35 ".....	36.23	37.19	36.26	38.37	37.00	40.24
40 ".....	31.98	33.02	31.87	33.99	32.45	35.63
45 ".....	27.79	28.87	27.60	29.67	28.05	31.14
50 ".....	23.72	24.79	23.49	25.46	23.88	26.80
55 ".....	19.88	20.84	19.64	21.42	20.02	22.61
60 ".....	16.29	17.15	16.06	17.62	16.49	18.64
65 ".....	12.98	13.72	12.81	14.08	13.31	14.97
70 ".....	10.06	10.63	9.94	10.93	10.41	11.62
75 ".....	7.57	7.98	7.48	8.19	7.89	8.73
80 ".....	5.61	5.92	5.54	6.03	5.84	6.38
85 ".....	4.10	4.38	4.05	4.35	4.27	4.57
90 ".....	2.97	3.24	2.93	3.13	3.10	3.24
95 ".....	2.14	2.40	2.09	2.26	2.24	2.27
100 ".....	1.53	1.77	1.46	1.64	1.60	1.59

Section 7.—International Comparisons of Vital Statistics

The following table gives a summary of Canada's general and provincial vital statistics rates along with those of several other countries. It will be noted that the low crude death rate in Canada is bettered by only three countries and that some of the provinces have lower rates than most other countries. The birth rate also helps to make Canada one of the fastest growing countries and this country currently ranks sixth among those listed. However there is marked room for improvement in rates of infant mortality; nine of the countries listed have lower rates than Canada.

26.—Principal Vital Statistics Rates of Selected Countries 1956

NOTE.—Countries are ranked according to the highest rates for births, marriages and natural increase and according to the lowest for deaths.

Source: United Nations publications.

Country or Province	Births		Deaths		Infant Mortality		Neonatal Mortality		Maternal Mortality		Marriages		Natural Increase	
	Rate ²	Rank	Rate ²	Rank	Rate ³	Rank	Rate ³	Rank	Rate ³	Rank	Rate ²	Rank	Rate ²	Rank
Australia.....	22.3	13	9.1	9	22 ⁴	4	16 ⁴	4	0.6 ⁴	4	7.6	12	13.2	14
Austria.....	16.4	27	12.3	22	44	14	28 ⁴	13	1.1 ⁴	8	8.2	7	4.1	29
Belgium.....	16.8	26	12.6	24	46	15	25 ⁶	12	0.9 ⁷	6	7.7	11	4.2	28
Canada.....	28.0	6	8.2	4	32	10	20	8	0.6 ⁶	4	8.3	6	19.8	6
Newfoundland.....	35.0	...	7.4	...	43	...	23	...	1.6	...	7.4	...	27.6	...
Prince Edward Island.....	26.8	...	9.4	...	40	...	25	...	0.4	...	6.6	...	17.4	...
Nova Scotia.....	27.5	...	8.3	...	29	...	16	...	0.3	...	8.0	...	19.2	...
New Brunswick.....	29.9	...	8.4	...	40	...	21	...	0.5	...	8.3	...	21.5	...
Quebec.....	29.4	...	7.6	...	41	...	25	...	0.9	...	8.1	...	21.8	...
Ontario.....	26.6	...	8.7	...	25	...	17	...	0.5	...	7.9	...	17.9	...
Manitoba.....	25.8	...	8.3	...	31	...	19	...	0.3	...	7.3	...	17.5	...
Saskatchewan.....	27.3	...	7.6	...	28	...	17	...	0.3	...	7.9	...	19.7	...
Alberta.....	31.1	...	6.9	...	25	...	16	...	0.4	...	8.9	...	24.2	...
British Columbia.....	25.9	...	9.6	...	26	...	17	...	0.4	...	9.3	...	16.3	...
Yukon.....	40.1	...	7.1	...	48	...	25	...	...	...	9.3	...	33.0	...
Northwest Territories.....	41.3	...	15.3	...	149	...	68	...	3.8	...	7.7	...	26.0	...
Ceylon.....	35.5	...	9.8	...	72 ⁴	19	43 ⁷	19	4.1 ⁴	15	6.3	19	25.7	4
Chile.....	35.0 ⁴	4	12.8 ⁴	25	121 ⁴	25	42 ⁷	18	3.4 ⁷	14	8.7 ⁴	4	22.2 ⁴	5
Denmark.....	17.2	25	8.8	7	25 ⁴	6	18 ⁷	6	0.5 ⁴	3	7.9	10	8.4	22
England and Wales.....	15.6	29	11.7	20	24	5	17	5	0.6	4	7.9	10	3.9	30
Finland.....	20.8	17	9.0	8	25	6	19 ⁷	7	1.0 ⁴	7	7.7	11	11.8	15
France.....	18.3	22	12.4	23	32	10	21 ⁴	9	0.6 ⁴	4	6.7	17	5.9	26
German Federal Republic.....	16.2	28	11.0	17	42 ⁴	13	28 ⁴	13	1.5 ⁷	11	8.9	2	5.2	27
India.....	27.4	7	11.6	19	114 ⁷	24	...	...	...	...	...	...	...	...
Ireland.....	21.0	16	11.7	20	36	11	23	10	0.8	5	5.7	21	9.3	21
Italy.....	18.1	23	10.3	15	48	16	28 ⁹	13	1.3 ⁷	10	7.5	13	7.8	23
Japan.....	18.4	21	8.0	3	40	12	24 ⁷	11	1.8 ⁴	12	7.9	10	10.4	18
Mexico.....	46.2 ⁴	...	13.3 ⁴	26	82 ⁴	20	33 ⁴	15	2.2 ⁷	13	6.6 ⁴	18	32.9 ⁴	2
Netherlands.....	21.2	14	7.8	2	19	2	15 ⁷	3	0.6 ⁴	4	8.1	5	13.4	13
New Zealand.....	24.7	12	9.0	8	25 ⁴	6	14 ⁷	2	0.5 ⁷	3	8.5	8	15.7	10
Northern Ireland.....	21.1	15	10.6	16	29	8	21	9	0.6	4	6.7	17	10.5	17
Norway.....	18.7	19	8.5	6	21 ⁷	3	13 ⁹	4	0.6 ⁷	4	7.2	15	10.2	20
Peru.....	32.7	9	6.8	1	94 ⁷	22	24 ⁷	11	1.4 ⁶	16	1.9	22	25.9	3
Portugal.....	22.3	13	12.0	21	89	21	30 ⁴	14	4.6 ¹¹	11	7.4	14	10.3	19
Scotland.....	18.5	20	12.0	21	29	8	19 ⁷	7	0.5	3	8.5	5	6.5	25
Spain.....	20.7	18	9.9	13	49	17	23 ⁶	10	1.1 ¹⁰	8	8.8	3	10.8	16
Sweden.....	14.8	30	9.6	11	17	1	13 ⁴	1	0.5 ⁷	3	6.9	16	5.2	27
Switzerland.....	17.4	24	10.2	14	26 ⁴	7	19 ⁴	7	1.1 ⁷	8	8.0	9	7.2	24
Union of South Africa (Whites).....	25.4	10	8.8	5	31 ⁴	9	20 ⁸	8	1.2 ⁸	9	9.4 ⁷	1	16.6	8
Union of Soviet Socialist Republics.....	25.6 ⁴	9	8.4 ⁴	7	...	...	...	...	...	...	...	...	17.2 ⁴	7
United States.....	24.9	11	9.4	10	26	7	19	16	0.4	2	9.4	...	15.5	11
Venezuela.....	46.7	...	9.9	13	70 ⁴	18	35 ⁴	16	...	...	5.9	20	36.8	1
Yugoslavia.....	26.1	8	11.2	18	97	23	40 ⁶	17	0.2 ⁷	1	8.8	3	14.9	12

¹ Under four weeks unless otherwise stated.² Per 1,000 population.³ Per 1,000 live births.⁴ 1955.⁵ Under one month.⁶ 1952.⁷ 1954.⁸ 1950.⁹ Registration area only.

CHAPTER VI.—PUBLIC HEALTH, WELFARE AND SOCIAL SECURITY*

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

PART I.—PUBLIC HEALTH

HEALTH IN CANADA

Advances in medical sciences and the development of health services have contributed to a marked improvement in the health of Canadians during recent years. Higher nutritional standards, better housing and the growth of social services have had a favourable influence. The greatest development in these areas has taken place since the end of the second world war, a period marked by record high fertility and relatively heavy immigration. There has also been a marked shift in health indices. Canada's crude death rate and maternal, infant, and neonatal death rates have shown as much proportionate decrease in the past ten years as had occurred during the previous twenty.

* Except where otherwise indicated, this Chapter was prepared by the Research and Statistics Division of the Department of National Health and Welfare, Ottawa.

Improvements in health conditions have affected people of all ages, though the greatest impact has been made on health of infants and youths. For some younger age groups death rates have dropped by more than two-thirds during the past quarter-century; gains made in older age groups have been much more modest. During the twenty-year period up to 1951 life expectancy at birth for males rose from 60 to 66 years and for females from 62 to 71 years. Average age at death, a cruder index of the life span, in the thirty-year period up to 1956 advanced for males from 40 to 58 years and for females from 42 to 61 years.

Some improvements in health can be directly related to specific public health measures, others to general advances in medical care. Well established community procedures like chlorination of water supplies, pasteurization of milk, sanitary disposal of sewage and health inspection of food handling have done much to reduce the incidence of typhoid fever and other water and food-borne infections. Vaccination has eliminated smallpox from Canada, though as recently as 1928 over three thousand cases of smallpox were reported in this country.

The extensive development of antibiotics and other prophylactic agents such as poliomyelitis vaccine has served to reduce the severity or the degree of disability caused by many primary infections and to provide protection against secondary infection. In 1956 only 1.8 p.c. of all deaths were due to infectious diseases, including tuberculosis; thirty years ago infectious disease accounted for 12.6 p.c. of deaths. Similar decreases in deaths have occurred in other diseases such as rheumatic fever and pneumonia where infection plays a part in other disease processes.

But, while many of man's oldest diseases are being controlled, the nature and cure of chronic and degenerative illness remain too largely unknown, and new sources of ill health are emerging from the complex development of industrial civilization. In this country and elsewhere occupational hazards from toxic substances and accidents have become a matter of increasing concern. The contamination of air and water for the community from industrial wastes becomes a progressively more severe problem. Accidents are assuming an alarming position among the leading causes of death, vehicular and other traffic accidents resulting in a tragic mounting loss of life. The rapid development of urban living has also created many other problems related to health. Inadequate housing and recreation facilities, excessive use of alcohol, drug addiction, and juvenile delinquency are special urban problems. Increasing use of radioactive agents in many different fields of endeavour requires special health precautions and the general problem of the effects of radiation on life is one of the most important and pressing of today.

Health of Mothers and Children.—Continuing high fertility produced a record of 450,000 births in Canada in 1956, but the 1956 infant mortality rate of 32 still stands far above the Swedish and Netherlands rates of 17 and 19 deaths per thousand live births. Of the 14,399 infants who died during their first year, nearly two-thirds of deaths occurred during the first 28 days of life. Immaturity, congenital malformations and birth injury continued to be the leading causes of infant deaths. For mothers, 278 deaths in 1956 established a new low rate of maternal mortality, approximately one-tenth the rate 25 years ago. Regional differences continue to affect the national picture of maternal and infant deaths.

Health of Young People.—Following the first year of life survival rates are high throughout childhood. Although more than one-third of the population are between one and 20 years of age, they account for only one of every 25 deaths. Accidents account for the largest number of deaths in childhood, principally traffic casualties and drownings. Respiratory and digestive disorders are also leading causes of death.

Despite the relatively low number of deaths, sickness rates in childhood remain high. The Canadian Sickness Survey of 1951 showed that 87 p.c. of children under 15 reported sickness and 57 p.c. reported time spent sick in bed. Each child suffered an average of three sicknesses a year, a sickness lasting 12 days on the average. Colds and influenza which are rife at all ages were a leading cause of sickness. The communicable diseases

of childhood, (measles, mumps, chickenpox, whooping cough and scarlet fever) also accounted for much sickness; well over a million cases of these diseases were reported during the survey year. In March 1957 there were nearly five thousand persons suffering from such long-term conditions, generally congenital or arising in early childhood, as epilepsy, cerebral spastic infantile paralysis or the late effects of infantile paralysis and there were over 10,000 mentally defective persons receiving allowances for total and permanent disabilities, in addition to those in institutions.

Health of Adults.—The health of the adult population has also been affected by modern preventive and treatment services and control of many infectious respiratory and digestive diseases has markedly reduced death rates from these causes. Degenerative diseases, on the other hand, continue to take an increasing toll of life and health through the working years.

Thirty years ago women experienced a higher death rate than men through their reproductive years; the situation is now reversed, with women's death rates reduced by two-thirds and male death rates reduced by one-half. Accidents, frequently occupational, are the leading cause of death for men; past the age of 30 cancer becomes the leading cause of death for women. From age 50 on there are marked trend differences in death rates between the sexes. While the rates for women in their 50's and 60's have dropped by about one-third there has, over the past quarter-century, been no significant decrease in the male death rate; in 1955 there were seven men who died for every four deaths among women in this age range. Half the deaths of both sexes are due to heart disease. One-third of female deaths and one-fifth of male deaths result from cancer. Diabetes also ranks as a leading cause of death for both sexes. Accidents continue to take a heavy toll with higher rates among males.

The Permanent Physical Disability Study carried out as a supplement to the Canadian Sickness Survey in 1951 reported that 317,000 persons aged 45 to 64 were permanently physically handicapped; of this number 136,000 were severely or totally disabled. The high death rate from degenerative diseases in the adult population is preceded in many instances by periods of illness and disability.

Health of Older People.—The growing burden of chronic illness in old age is reflected in mortality and morbidity data. In 1955, 63 p.c. of deaths over age 65 were caused by heart and artery diseases; 15.6 p.c. were the result of cancer. Cardiovascular disease and cancer account for approximately one-third of all old age admissions to general hospitals and a large share of hospital care in old age is for respiratory and digestive ailments. The chronic nature of sickness in old age is emphasized by the findings of the Canadian Sickness Survey. Persons over 65 accounted for only 7 p.c. of the survey population but for 15 p.c. of the total days of illness. Much disability was permanent as was indicated by the fact that 162,000 persons over 65 were estimated to be severely or totally disabled. Heart disease, arthritis, impairments from accidents, blindness, deafness and chronic diseases of the nervous system accounted for 60 p.c. of all persons reporting permanent disability. The Canadian Sickness Survey did not include residents of chronic care institutions. In 1955 there were about 140,000 persons under care in mental, tuberculosis and other chronic care hospitals. Persons over 65 years of age accounted for one-quarter of all separations from mental institutions. One-quarter of discharges and two-thirds of deaths in mental institutions in old age were diagnosed as senile or suffering from cerebral arteriosclerosis.

Health Problems.—The increasing impact of chronic disease and the continuing high death rates in the productive years of life caused by degenerative diseases, high accident rates, the threat presented by radiation and other hazards to the health of the Canadian as well as other peoples are the subject of increasingly intense research in many countries. Canadian research has made a considerable contribution both in terms of guiding hypotheses and in clinical work. The active participation of Canadian scientists in international research ensures that Canadians are able to benefit quickly and freely

from any new findings which may modify established medical practice. The system of informational services, preventive public health and health care programs being built up across the country brings to increasing numbers of Canadians the resources and facilities that make possible the raising of health standards.

Section 1.—Federal, Provincial and Municipal Health Activities

Public health services in Canada are provided through the federal, provincial and local governments, with important contributions being made by voluntary agencies.

The Federal Government provides consultant and specialist services to the provinces, assists in the financing of provincial programs, provides services to special groups such as veterans and Indians, exercises control over the standard and distribution of food and drugs, maintains quarantine measures and is responsible for the carrying out of certain international health obligations.

The provinces play the major role in the provision of public health services to the people of Canada. Most programs are administered by the province or by local government under provincial legislation.

Voluntary agencies organized nationally, provincially or locally provide many services and carry on programs of health education.

Subsection 1.—Federal Health Activities

Federal participation in health matters is largely centred in the Department of National Health and Welfare, with certain important programs being administered by the Department of Veterans Affairs which provides medical and hospital care to veterans for disabilities resulting from war service; the Department of National Defence which is responsible for the health of the Armed Forces and which, through the Defence Research Board, participates in medical research; the Medical Division of the National Research Council which administers grants for medical research; and the Dominion Bureau of Statistics which is responsible for the collection and compilation of health statistics. The Department of Agriculture has certain responsibilities in connection with food production.

Under the Department of National Health and Welfare Act of 1944 that Department is responsible for the administration of certain statutes, for research in health matters, for the carrying out of international health obligations undertaken by Canada and, in co-operation with the provinces, for the preservation and improvement of public health.

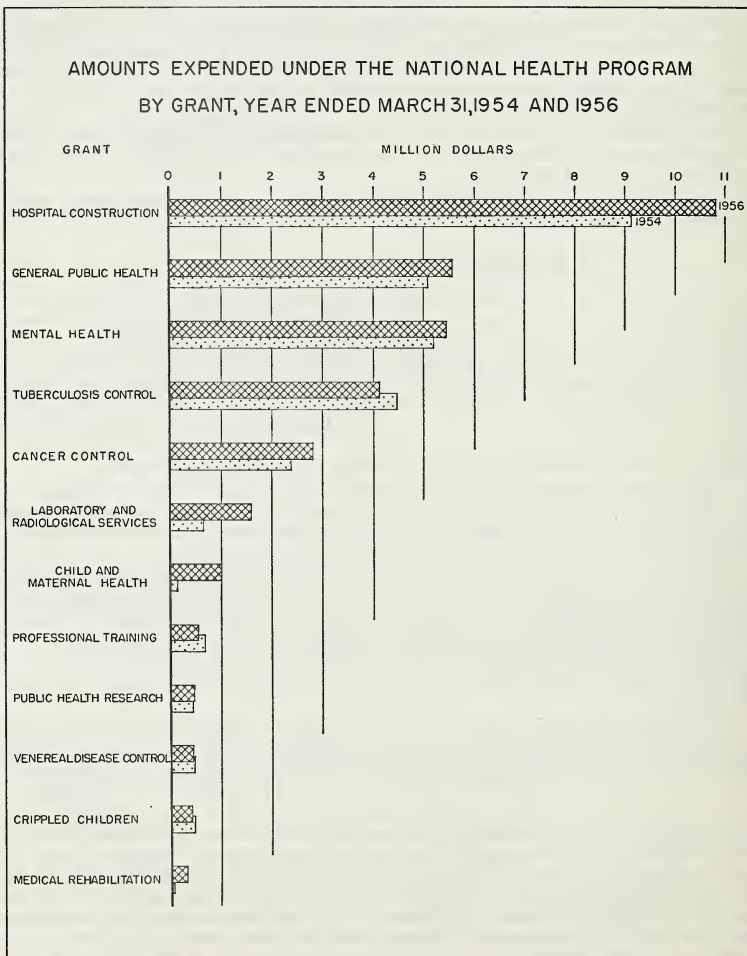
Under the Quarantine Act, the Department maintains a maritime and aerial navigation quarantine service against entry of infectious diseases; it advises on the administration of sections of the Immigration Act dealing with health and conducts, in Canada and overseas, the medical examination of applicants for immigration. It also provides care for sick mariners, as required under Part V of the Canada Shipping Act, and has certain national and international responsibilities with regard to the pollution of boundary and other waters.

Under the Food and Drugs Act, the Proprietary or Patent Medicine Act, and the Opium and Narcotic Drug Act, the Department is responsible for the control of the safety and purity of food and drugs; the registration, preparation and sale of proprietary or patent medicines; and control of the import, export and distribution of narcotic drugs.

The Department advises on the visual eligibility of applicants for blindness allowances and co-operates with the provinces in the provision of surgical or remedial treatment for recipients of these allowances; it is responsible for supervision of health conditions for persons employed on federal public works, as provided under the Public Works Health Act, and maintains a program for the conservation and promotion of the health of civil servants and other Federal Government employees. Medical advisory services are provided for the Department of Transport in all matters pertaining to the safety, health and comfort of air crew and passengers.

The National Health Program.*—The National Health Program, which consists of 12 separate grants available to all provinces and the territories, was introduced in 1948 for the development of health and hospital services. Since the inception of the program the provinces have steadily increased utilization of their grants. The annual amounts of expenditure in each fiscal year have been as follows: 1948-49, \$7,400,000; 1949-50, \$15,500,000; 1950-51, \$18,700,000; 1951-52, \$23,900,000; 1952-53, \$26,900,000; 1953-54, \$29,200,000; 1954-55, \$31,600,000; 1955-56, \$33,500,000; and 1956-57, \$36,300,000.

* A special article on the first five years of the National Health Program is given in the 1954 Year Book, pp. 215-223.



1.—Amounts Available to the Provinces and Amounts and Percentages Expended under the National Health Program, by Grant, Year Ended Mar. 31, 1957

Grant	Amount Available ¹	Amount Expended	Proportion Expended
	\$	\$	p.c.
Cancer control.....	3,598,795	3,248,817	90
Crippled children.....	519,898	465,751	89
General public health.....	7,800,500	6,040,234	77
Hospital construction ²	17,918,174	11,374,876	63
Mental health.....	7,234,868	6,342,328	88
Professional training.....	516,300	515,626	99
Public health research.....	512,900	430,283	84
Tuberculosis control.....	4,239,531	4,275,379	101
Venereal disease control.....	518,099	466,020	90
Child and maternal health ³	2,000,000	993,277	50
Laboratory and radiological services ³	7,020,450	1,639,829	23
Medical rehabilitation ³	1,000,000	487,723	49
Totals.....	52,879,515	36,280,143	69

¹ Authorized by P.C. 1956-33/660 and by Supplementary Estimates (Vote No. 655). For the purpose of this table, the amounts available for the Yukon and Northwest Territories were distributed by grant although the Order-in-Council did not show this distribution. ² Grant consisted of \$6,683,660 for new projects and a revote of \$11,155,324 to complete projects approved before Apr. 1, 1953, on which construction started before Oct. 1, 1953, and also projects approved after Mar. 31, 1953, and those approved prior to that date the construction of which commenced after Sept. 30, 1953. Also included is special revote of \$79,190 for the Yukon and Northwest Territories. ³ First introduced in fiscal year 1953-54.

Up to Mar. 31, 1957, aid for construction was approved for 64,788 beds, 8,183 bassinets, 11,450 nurses' beds and space in community health centres and combined laboratories exceeding 7,500 bed equivalents. Approximately 15,700 health workers had been trained or were undergoing special training and more than 6,000 additional health workers had been employed with federal grant assistance.

Federal Grants to Non-government Organizations.—Grants are paid directly to the following non-government agencies engaged in health work: the Canadian Red Cross Society, the Canadian Tuberculosis Association, the Victorian Order of Nurses, the St. John Ambulance Association, the Canadian Paraplegic Association, the Canadian Mental Health Association, the Health League of Canada, the Canadian Public Health Association, the Canadian National Institute for the Blind, L'Association Canadienne-Française des Aveugles, L'Institut Nazareth de Montreal, and the Montreal Association for the Blind.

Federal grants are also provided under the National Health Program to assist in the operation of special treatment services carried out in a number of provinces by voluntary organizations such as the Canadian Arthritis and Rheumatism Society and various agencies engaged in the rehabilitation of crippled children.

Medical Care of Indians and Eskimos.—In 1956, 18 hospitals, 44 nursing stations, 26 clinics, 8 nurse dispensaries and 62 other health centres were operated by the Department which also reimburses on a per diem basis the mission and other non-federal hospitals that provide accommodation for Indians and Eskimos. Full-time departmental medical officers serve the larger Indian reserves and part-time officers serve the smaller bands. Fees are also paid to local physicians for services to Indians. Information relating to all health services provided in the Yukon and Northwest Territories is given at pp. 250-251.

Consultative Services.—Certain Divisions of the Department provide technical information and advice concerning the evaluation of programs and procedures and the establishment of standards in various health fields; they conduct surveys in research and development both independently and in co-operation with other departments and agencies. These Divisions include Blindness Control, Child and Maternal Health, Occupational Health, Nutrition, Mental Health, Dental Health, Epidemiology, Hospital Design, the Laboratory of Hygiene, Information Services, and Research and Statistics.

Federal Hospital Insurance and Diagnostic Services Offer.—During 1956 and 1957 considerable progress was made toward the development of a federal-provincial system of hospital insurance and laboratory and radiological diagnostic services. For some years the Provinces of British Columbia and Saskatchewan have operated programs of hospital insurance on the basis of universal coverage and in the Provinces of Alberta and Newfoundland there have been similar programs covering smaller percentages of their population.

In January 1956 the Federal Government offered to share on a grant-in-aid basis the costs of hospital insurance and laboratory and radiological diagnostic services on certain conditions. The offer was conditional on its acceptance by a majority of provinces representing a majority of population. Universal benefits must be available within the province and the offer specified shareable and non-shareable costs. Standard ward hospital care must be provided as a basic benefit and the costs of superior accommodation must be charged to the patient who might, if he chose, insure voluntarily for this accommodation. It was anticipated that there would be substantial variation between provinces in the patterns of provincial organization and methods of financing, whether by personal premiums, sales taxes, general provincial revenues or combinations of these.

The Hospital Insurance and Diagnostic Services Act passed by the Parliament of Canada was proclaimed on May 1, 1957, authorizing the Government of Canada to enter into agreements with provincial governments. By the summer of 1957 it was apparent that at least eight provinces had indicated their intention of proceeding with hospital insurance plans along the lines of the federal proposal.

Subsection 2.—The Dominion Council of Health

The Dominion Council of Health is a statutory advisory body to the Minister of National Health and Welfare, established in 1919 and deriving its present legislative authority from Sect. 7 of the National Health and Welfare Act 1944 (R.S.C. 1952, c. 74). It is composed of the Deputy Minister of National Health who acts as Chairman, the Deputy Ministers of Health of each of the ten provinces and five appointees of the Governor in Council, selected by tradition to represent such major segments of the population as agriculture, organized labour and women's organizations.

The duties and powers of the Council as formally prescribed by the Governor in Council are:—

- (1) The consideration of matters relating to the promotion or preservation of the health of the people of Canada and the initiation of recommendations and proposals to the Minister of National Health and Welfare and other appropriate authorities in regard thereto;
- (2) The furnishing of advice to the Minister of National Health and Welfare in respect to the matters provided in Sect. 5 of the Department of National Health and Welfare Act, relating to the promotion or preservation of the health of the people of Canada, over which the Parliament of Canada has jurisdiction.

Through the Council a direct means of co-operation at the technical level is provided between provincial health departments and the Department of National Health and Welfare. In addition to being able to draw on both federal and provincial resources to aid its deliberations, it is assisted by a number of technical advisory committees composed of federal and provincial officials in different specialized fields. These committees include the Technical Advisory Committee on Public Health Laboratory Services, the Advisory Committee on Mental Health, the Federal-Provincial Nutrition Committee, the Federal-Provincial Conference on Health Education, the Federal-Provincial Conference of Communicable Disease Control Directors and the Technical Advisory Committee on Public Health Engineering.

The Council usually meets twice each year. Any member may submit items for the agenda and any agency wishing to make representation to the Council may do so. Consideration of a matter by the Council usually infers that it is of some common interest or concern to more than one province.

Although the Council is of a purely advisory character its recommendations reflect the considered opinions of senior health administrators and scientific workers across the country and have had very considerable influence on the development of public health administration in Canada. The recommendations frequently have led to an early combined approach by federal and provincial governments which might otherwise have been achieved only after long periods of negotiation. It has taken an active part in the development of the National Health Program and, in addition to advising on the general operation of the program and on situations developing in different provinces, has played an important role in such combined federal-provincial projects as the National Sickness Survey. Through the arrangements made by the Council for the production and distribution of ACTH and cortisone for use by clinical investigators throughout Canada it has been estimated that the clinical assessment of their value was advanced by at least two years. In the same way the Council was able to facilitate arrangements for the production of gamma globulin and later of Salk vaccine.

Subsection 3.—Provincial and Municipal Health Activities

Provincial health functions commonly include central planning and administration; the operation of laboratories and of special programs affecting the entire province in such fields as cancer, mental health and tuberculosis; consultant service to local authorities; and either supervision or administration of local services.

At the local level responsibility for services varies widely but municipalities in most provinces provide basic services and participate in the cost of hospital care for indigents. In recent years there has been a rapid growth of health services in smaller centres and rural areas through the organization of health units with full-time staff serving counties or other combinations of local government areas. These units provide a generalized program that includes public health nursing, sanitary inspection, communicable disease control, child and maternal health and school hygiene and health education. Financial and administrative responsibility usually is shared by the provincial and the local authority. Municipalities outside fully organized health-unit areas usually appoint part-time medical officers and other personnel while the provincial authorities assume responsibility in the areas lacking municipal organization.

Newfoundland.—Health services in Newfoundland are administered largely by the Province and include provision of public hospital and medical care in large areas of the Province.

General Public Health Services.—A preventive service is operated in St. John's through public health nurses. Dietary supplements such as orange juice and cod liver oil are distributed throughout the Province. Environmental health services are administered through an inspection service in St. John's and regional offices at Corner Brook and Grand Falls. The Division of Laboratories administers a public health laboratory, the St. John's General Hospital laboratory and a blood bank. Routine diagnostic work is being decentralized through the employment of combined laboratory and X-ray technicians in outpost cottage hospitals.

Hospital and Medical Care.—The Department of Health provides prepaid medical and public ward hospital care to almost 50 p.c. of the population through its Cottage Hospital Plan; free medical and hospital care to indigents wherever facilities are available; and, under a program introduced in 1957, free public ward hospital care and out-patient diagnostic services for all children under 16 years of age. It operates a large general hospital at St. John's as well as 18 cottage hospitals and seven nursing stations distributed along the coastline, and also pays private physicians and non-governmental hospitals for the care of patients covered by the three public programs. In northern areas, responsibility for service has been delegated to the International Grenfell Association and the Notre Dame Bay Memorial Hospital Association, where community prepayment plans have been integrated into the Cottage Hospital Plan.

The Cottage Hospital Plan is financed from local subscription fees and general provincial revenues. In most areas, prepayment of \$15 annually by the head of each family and \$7.50 for single adults entitles subscribers to out-patient diagnosis and treatment, home visits by the doctor, and hospital care in the local hospital or the St. John's General Hospital. Each hospital is directed by a medical health officer responsible for domiciliary care in a medical practice area adjoining the hospital, while additional medical health officers and nurses supply care in outlying districts.

Mental Health.—Mental Health services are centred at the Hospital for Mental and Nervous Diseases in St. John's which operates in-patient and out-patient services, a day-care centre and consultant and educational services. All treatment is free of charge.

Tuberculosis.—With tuberculosis incidence above the national average, tuberculosis control has been of particular importance in Newfoundland. Two provincial sanatoria, as well as tuberculosis units in two other hospitals, provide free treatment for all cases of pulmonary tuberculosis. Preventive, case-finding and follow-up services are handled by the Tuberculosis Dispensary at St. John's and the West Coast Sanatorium in Corner Brook. The Newfoundland Tuberculosis Association participates in mass X-ray surveys, B.C.G. vaccinations, and rehabilitation services. Tuberculosis control activities have contributed to such reductions in tuberculosis hospitalization rates that early in 1957 a part of the St. John's sanatorium was converted into much needed accommodation for mental patients.

Cancer.—Special diagnostic and treatment services for cancer are located at the St. John's General Hospital, and treatment is subsidized by the Province.

Poliomyelitis.—Special diagnostic and treatment services for poliomyelitis are located at the St. John's General Hospital, and treatment is subsidized by the Province.

Venereal Disease.—Provincially administered venereal disease clinics are operated at St. John's and at various cottage hospitals throughout the Province; free treatment and drugs are available to persons attending the central clinic, to cottage hospital subscribers and to medical indigents.

Crippled Children.—Voluntary agencies assist in development of appropriate programs; one such agency, the Sunshine Camp Association, offers restorative services to physically impaired children.

Rehabilitation.—The Rehabilitation Branch, through the Co-ordinator of Rehabilitation, conducts case-finding surveys and arranges for counselling, training and job placement of disabled persons.

Prince Edward Island.—The Health Department supplies directly many of the services which in the larger provinces are provided by local health agencies. Most activities are carried out from the Health Centre at Charlottetown and a smaller office at Summerside, under the direction of the Deputy Minister, assisted by a full-time Health Officer.

General Public Health.—The Division of Public Health Nursing, through its staff of eleven public health nurses in various communities, is largely responsible for basic local services. Sanitary services, vital statistics, dental public health and health education are handled by separate health divisions; consultative child and maternal health services are provided. Laboratory procedures are performed by a central laboratory and seven hospitals; most tests are free of charge.

Hospital and Medical Care.—The Provincial Government pays grants of \$1 per patient day to general hospitals on behalf of all patients. Payment for the hospital or medical care of indigents is a discretionary responsibility of local government.

Mental Health.—Facilities for treatment of mental illness include the Riverside Hospital, the Provincial Infirmary largely for senile and mentally defective indigent patients, and an out-patient clinic for adults and children. Charges are made for maintenance if able to pay and the Province pays the remainder.

Tuberculosis.—Tuberculosis control includes case-finding and diagnostic clinics, treatment and rehabilitation services, conducted by the Province in co-operation with the Prince Edward Island Tuberculosis League. Diagnostic services are free. Treatment services at the Provincial Sanatorium in Charlottetown, though not unqualifiedly free, are heavily subsidized by the Province. Medically indigent patients receive free treatment.

Cancer.—Free diagnostic services, including hospitalization for diagnosis, are available to cancer patients through two clinics administered by the Division of Cancer Control.

Poliomyelitis.—Poliomyelitis treatment is provided at an orthopaedic centre located at the Provincial Sanatorium; the Health Department pays one-half of the cost of hospital and special nursing care during the acute stage of the disease and supplies free treatment to patients with residual paralysis.

Venereal Disease.—A venereal disease clinic operates in Charlottetown as a part of the provincial venereal disease control program.

Dental.—Free dental treatment at mobile clinics is available for Grade I and II children in rural areas. Preventive clinics operate for the topical application of sodium fluoride to pre-school and school children.

Rehabilitation.—General training of disabled persons is the responsibility of the Rehabilitation Co-ordinator in the Department of Education. Tuberculosis patients receive rehabilitation services with the aid of the Prince Edward Island Tuberculosis League.

Nova Scotia.—Most services provided by the Department of Public Health are administered through eight divisional or district offices. The Department of Public Welfare also administers certain services, notably those for mentally deficient children. Major provincial facilities include the Victoria General Hospital, the Nova Scotia Hospital for the mentally ill and three tuberculosis sanatoria.

General Public Health.—Most preventive services are carried out through the eight local divisional offices, which are staffed with public health nurses and sanitary inspectors under the supervision of a full-time medical health officer. Provincial laboratory services are organized through the Division of Public Health Laboratories which operates two branch laboratories and a central public health laboratory; the Division of Pathology which does tissue pathological examinations and related tests; and the Biochemistry Laboratories Division. All public health and histopathology procedures are supplied without charge. The Division of Laboratory and Radiological Services, under a part-time director, co-ordinates public health and hospital laboratory and radiological services.

Hospital and Medical Care.—The provincial Health Department meets the operating deficit of the Victoria General Hospital, and pays approved hospitals a grant of 50 cents a day on behalf of all patients; municipalities are required to pay up to \$9 a day for hospitalization of resident indigents. The Department of Welfare supervises a program of medical services, including physician's care in the home and office, for recipients of blind persons' allowances and mothers' allowances under a scheme sponsored by the Nova Scotia Medical Society and financed by per capita payments from the Province.

Mental Health.—Organized hospital services for the mentally ill include the Nova Scotia Hospital for active treatment, operated by the provincial Health Department; the psychiatric unit and out-patient department of the Victoria General Hospital; the Nova Scotia Training School for mentally deficient children, administered by the provincial Welfare Department; and 17 county homes and hospitals, operated by local government agencies, which mainly provide custodial care for long-term patients. Psychiatric clinics, maintained largely by the Health Department, are located at Halifax, Wolfville, Yarmouth and Digby. Treatment is free at the Nova Scotia Hospital, but in the other institutions relatives may be charged for the patient's maintenance. Resident indigents are supported by their municipalities.

Tuberculosis.—Free treatment is provided, mainly in the three provincial sanatoria, and the municipal sanatorium at Halifax. Several tuberculosis units in general hospitals have now been discontinued. Divisional medical officers are responsible for detection, case-finding and follow-up of tuberculosis cases in their districts.

Cancer.—A clinic with radiation treatment facilities is included in the service provided by the provincial Victoria General Hospital.

Poliomyelitis.—A treatment clinic for poliomyelitis is included in the service provided by the provincial Victoria General Hospital. Branch poliomyelitis clinics have been established at Sydney, Antigonish and Yarmouth.

Venereal Disease.—Venereal disease detection services are provided mainly through the eight local health districts. Treatment is free of charge through the provincial venereal disease clinic in Halifax, or through private physicians reimbursed by the Province.

Dental.—Mobile dental clinics are operated by the Division of Dental Services to provide free treatment to rural school children under 13 years of age.

Rehabilitation.—Nova Scotia rehabilitation services to the disabled are the result of co-operative effort on the part of various voluntary agencies, professional groups and government departments, with general assistance from a Rehabilitation Co-ordinator appointed to the Department of Public Health. Among the most recent developments were the formation of the Nova Scotia Council for the Rehabilitation of Disabled Persons and the opening in 1956 of a civilian rehabilitation centre for both adults and children in Halifax. The Health Department and the Nova Scotia Tuberculosis Association combine in attending to the specific rehabilitation problems of tuberculosis patients.

New Brunswick.—Services are provided through the Health Branch of the Department of Health and Social Services which includes Divisions of Sanitary Engineering, Public Health Nursing, Communicable Disease Control, Maternal and Child Health, Health Education, Hospital Services and Laboratories. There is a high degree of provincial participation in the supplying of service and close working relationships with voluntary health agencies and hospitals.

General Public Health.—Although responsibility for local public health functions is divided between the Province and 15 local sub-health district boards of health, the provincial Health Department employs all six full-time medical health officers and nearly all public health nurses. Each medical health officer serves from two to four sub-health districts; the activities of most local boards are confined to vital statistics and environmental sanitation. The Bureau of Laboratories administers a central laboratory in Saint John and two branch laboratories in Moncton and Fredericton, designed to integrate public health and hospital laboratory services. Public health procedures, RH factor investigations and tumour diagnosis are performed free of charge but hospitals are charged for other procedures at cost.

Hospital and Medical Care.—The Province pays grants of 50 cents a day to approved general hospitals on behalf of all patients. Hospital and medical care for indigents is a matter of municipal discretion, but emergency admissions are a mandatory responsibility. Inspection of hospitals, hospital grants and the over-all planning of hospital facilities are directed by the Division of Hospital Services.

Mental Health.—All municipalities in the Province are responsible for paying a portion of the cost of treating indigent mental patients in provincial mental hospitals. The provincial Mental Health Division administers two mental hospitals and three community clinics as part of a comprehensive program which includes operation of a day training school for mentally retarded children. The provincial division of the Canadian Mental Health Association co-operates with provincial authorities in an active mental health education program.

Tuberculosis.—Free diagnostic services are provided in ten centres, including a central clinic in Saint John, by the Division of Tuberculosis Control. It also supervises and provides free treatment for both pulmonary and non-pulmonary tuberculosis in two privately operated, one municipal, and two provincially owned sanatoria.

Cancer.—Six cancer diagnostic centres and four treatment centres operate under the supervision of the provincial Director of Cancer Control. Diagnostic and radiation treatment services, including hospitalization, are made available without charge to the patient.

Poliomyelitis.—Acute and post-paralytic cases of poliomyelitis receive free care at the provincial Polio Clinic and Health Centre at Fredericton.

Venereal Disease.—The Division of Communicable Disease Control co-ordinates all infectious diseases and measures and administers a program of free treatment for venereal disease patients carried out at a clinic in Saint John and by private physicians.

Crippled Children.—Diagnostic and treatment services are provided free of charge for physically impaired children of indigent parents.

Dental.—Preventive dental health services for children are in course of development through the Dental Health Division.

Rehabilitation.—Rehabilitation efforts in New Brunswick have been stimulated by the appointment of a Rehabilitation Co-ordinator. Arrangements have been made to obtain specialized medical and vocational training services for needy disabled patients. Rehabilitation counselling and job placement are also in this new program. Tuberculosis patients receive rehabilitation aid from a program operated by the New Brunswick Tuberculosis Association.

Quebec.—The Provincial Ministry of Health plays a leading role in preventive public health services in Quebec though other activities are delegated to voluntary religious and lay organizations to a greater extent than in most other provinces.

General Public Health.—Except in Montreal and some other larger urban centres, full-time local public health services are administered directly by the provincial Health Department. The Division of Health Units supplies service through 70 county and multi-county units covering more than 60 p.c. of the population. Each unit is financed through a small local contribution and the remainder is provided by the Province. Technical direction and advice is available through the provincial divisions of Epidemiology, Tuberculosis, Nutrition, Demography, Health Education, Venereal Diseases, Sanitary Engineering and Industrial Hygiene. Laboratory services, including bacteriological and other analyses, are available to physicians and health units through the central public health laboratory in Montreal.

Hospital and Medical Care.—Free medical and hospital care are available to indigents from a variety of dispensaries, clinics and other charitable agencies. Under the provisions of the Public Charities Act, public hospital care and care in special institutions is provided free to persons certified as unable to pay their own costs. The agency supplying the service absorbs one-third of the indigent rate; the municipality of residence assumes 15 p.c. if rural and 24 p.c. if urban; the Province pays the remainder. The provincial Division of Medical Services to Settlers provides free nursing and physician's services to residents of isolated areas.

Mental Health.—Sixteen mental institutions and more than 25 clinics and psychiatric units are operated mainly by voluntary lay and religious organizations. Considerable responsibility rests with Laval, Montreal and McGill Universities, which co-operate with mental hospital authorities and co-ordinate community out-patient and in-patient services. The provincial Division of Psychiatric Hospitals administers an institution for mentally

ill prisoners, appoints superintendents to the various mental hospitals and exercises supervisory and regulatory functions. Patients who can afford to pay contribute part of the cost of maintenance, all other costs are paid by the Province.

Tuberculosis.—All sanatoria are operated by lay or religious groups under medical directors appointed by the Health Department; the cost of treating medical indigents is borne by the Province. The provincial Tuberculosis Division co-ordinates the work of the health units, voluntary agencies and sanatoria and gives assistance to municipal agencies carrying out anti-tuberculosis work.

Cancer.—Cancer services are centred mainly in hospitals affiliated with the three universities; financial assistance for diagnosis, treatment and hospital care comes from federal-provincial grants.

Poliomyelitis.—Treatment facilities are maintained by voluntary organizations.

Venereal Disease.—The provincial Venereal Diseases Division subsidizes free treatment administered by the out-patient departments of general hospitals, and supervises preventive and case-finding measures.

Crippled Children.—Treatment facilities for crippling conditions in children are maintained by voluntary organizations.

Rehabilitation.—Medical Rehabilitation facilities have been developed in a number of teaching and general hospitals and comprehensive services organized in four specialized rehabilitation centres—the Rehabilitation Institute of Montreal, the Occupational Therapy and Rehabilitation Centre in Montreal, the Quebec Rehabilitation Clinic in Quebec City, and the Rehabilitation Clinic operated by the Quebec Workmen's Compensation Board. The Department of Health and the Department of Social Welfare and Youth give grants to numerous organizations offering medical, educational and vocational services to groups of disabled persons.

Other Services.—Treatment facilities for arthritis and other diseases are maintained by voluntary organizations.

Ontario.—Public health responsibility has been decentralized in Ontario to a large number of locally administered health units and municipal health departments. The provincial Department of Health assists with auxiliary services, technical advice and grants-in-aid. Voluntary agencies administer certain programs for specific diseases, under sponsorship of the health department, while other special programs have been developed directly by the Province.

General Public Health.—Full-time local health services are available to more than 70 p.c. of the population through 29 health units, and 13 municipal departments. Provincial grants to health units, varying from 25 to 50 p.c. of the cost, are administered by the Health Units Branch of the Department. Specialized provincial Divisions provide consultative services in sanitary engineering, maternal and child hygiene, epidemiology, public health nursing, tuberculosis prevention, mental health, industrial health, venereal disease control and dental health. The Division of Laboratories provides public health and clinical laboratory services through a central laboratory in Toronto, 13 regional laboratories, five associated laboratories and a mobile unit. The Division of Industrial Hygiene investigates occupational health hazards, operates a laboratory and administers the civil service health centres.

Hospital and Medical Care.—General hospital care for indigents is a statutory municipal responsibility with minimum per diem rates fixed by the Province; additional assistance comes from provincial per diem maintenance and special grants paid to all public hospitals. In 1956, the Hospital Service Commission of Ontario was set up to plan hospital developments in the Province and to administer the proposed system of hospital care insurance

to be initiated. Certain medical services are available to recipients of all types of public assistance through a formal arrangement between the Province and the Ontario Medical Association. The program includes the services of a physician in his office or the patient's home, necessary consultations, home confinements, emergency drugs and refractions. Monthly per capita payments by the Department of Public Welfare to the Medical Association for these services are administered by a special agency, "The Medical Welfare Plan".

Mental Health.—Fifteen mental hospitals and two training schools for mentally defective persons are administered by the Division of Mental Health. Travelling clinics and out-patient departments are operated by some provincial hospitals but most community and child guidance centres are the responsibility of local health departments or voluntary groups. Extensive grants are available for construction of psychiatric units in general hospitals. The Province pays for most of the cost of care in mental hospitals.

Tuberculosis.—All measures for the prevention and treatment of tuberculosis are the general responsibility of the Division of Tuberculosis Prevention. Local voluntary associations support provincially conducted X-ray surveys and chest clinics and operate 13 of the Province's 15 tuberculosis sanatoria. The Ontario Tuberculosis Association co-ordinates the work of the member agencies. Tuberculosis treatment is virtually free for most patients, although patients with means may contribute to maintenance.

Cancer.—Cancer services are provided through the Ontario Cancer Treatment and Research Foundation which administers or finances eight regional treatment centres and two diagnostic clinics; the program includes free radiotherapy for patients with insufficient means. Affiliated with the Foundation is the newly established Ontario Cancer Institute in Toronto, a hospital centre designed exclusively for cancer diagnosis, treatment and advanced research.

Poliomyelitis.—The Province pays most of the costs of hospital care of poliomyelitis patients during the post-paralytic phase, as well as costs of physiotherapy and nursing in specially designated hospitals.

Venereal Disease.—Venereal disease control is to a considerable extent decentralized through the municipal health departments and local health units; the central Division of Venereal Disease Control subsidizes eleven clinics for free diagnosis and treatment.

Crippled Children.—The Ontario Society for Crippled Children operates diagnostic clinics, treatment units, summer camps and other services.

Dental.—The Division of Dental Services administers grants for school treatment services and operates mobile dental clinics.

Rehabilitation.—Rehabilitation services for adults are provided through various voluntary organizations and government agencies. One of the best known facilities is the Medical Rehabilitation Centre for injured workmen, administered by the Ontario Workmen's Compensation Board. The Province has a rehabilitation program for handicapped persons not covered by other legislation. The 1955 Rehabilitation Services Act authorizes the purchase of approved rehabilitation services that may enable a handicapped person to engage in remunerative employment.

Manitoba.—Provincial health services in Manitoba are provided through divisions of health services and psychiatric services in the Department of Health and Public Welfare, and through several quasi-governmental and voluntary agencies. Public health and personal health care services have been developed in close co-operation with local authorities under the Health Services Act which authorizes preventive medical services through local health units, diagnostic services through laboratory and X-ray units, and the establishment of medical care and organized hospital districts.

General Public Health.—Full-time local public health services are available to 72 p.c. of Manitoba's population through the City of Winnipeg Health Department and 13 local health units jointly administered and financed by provincial and local governments. Each health unit has an advisory board, and the municipalities are responsible for one-third of the cost. The provincial Health Department employs and pays the staff, and co-ordinates field supervision through its Bureau of Local Health Services. Five local laboratory and X-ray units, with facilities centred in community hospitals, make modern diagnostic aids available to rural medical practitioners and reduce the direct cost to the patient. Services are offered on a prepayment basis, with personnel appointed and two-thirds of the cost paid by the provincial Health Department through its Bureau of Laboratory and X-ray Services. The provincial Section of Laboratory Services undertakes free public health procedures through one central and two branch laboratories.

Hospital and Medical Care.—Through the Bureau of Medical Care, groups of towns, villages and municipalities are encouraged to establish prepaid medical care by the employment of municipal doctors; there are 14 districts. The Bureau of Hospitalization is concerned with the over-all planning of hospital facilities, and the administration of provincial responsibilities under the Hospital Aid Act. The Province pays 40 p.c. of the cost of in-patient and out-patient hospital care for municipal indigents, with rates of payment for each hospital fixed by the provincial Hospital Rate Board. The municipalities are required to pay the remainder of hospital care costs but indigent medical care is a discretionary municipal responsibility.

Mental Health.—Provincial mental institutions are operated at Winnipeg, Selkirk and Brandon and a school for the mentally defective at Portage la Prairie. Community mental health services include out-patient services at mental hospitals and child guidance clinics. The mental institutions collect maintenance costs from patients who can afford them; the Province pays the remainder.

Tuberculosis.—Tuberculosis control is administered by the Sanatorium Board of Manitoba which operates four sanatoria (three of which are federally owned for Indian services) and several stationary and mobile chest clinics. Costs of diagnostic and treatment services for pulmonary and non-pulmonary tuberculosis are paid from public funds. The Province maintains a tuberculosis central registry and a follow-up service for discharged patients.

Cancer.—The Manitoba Cancer Treatment and Research Foundation, subsidized by the Province, administers cancer activities, including diagnosis, treatment, follow-up and statistical services. A free rural cancer biopsy service is in operation; in addition, diagnostic services are available without charge to medically indigent rural residents. Radium and X-ray treatments are free of charge to all residents of the Province.

Poliomyelitis.—The treatment program for poliomyelitis patients, administered by the Bureau of Epidemiology, provides free public ward care for the first 21 days following admission to hospital, and additional free hospitalization following the 60th day after admission until discharge.

Venereal Disease.—The Bureau of Venereal Disease Control operates a free treatment clinic in Greater Winnipeg and pays physicians for treatment of patients in other parts of the Province who are unable to pay.

Rehabilitation.—The Society for Crippled Children and Adults acts as a central rehabilitation agency for adults and children. Its program includes disability assessment clinics, purchase of treatment services and prosthetic appliances, guidance training and follow-up services. Rehabilitation services for tuberculosis patients are administered by the Sanatorium Board. The provincial co-ordinator of rehabilitation, employed by the Department of Health and Public Welfare, exercises general supervision over the program, screens applicants for rehabilitation services, and operates a central registry of disabled persons. Over-all planning is the function of the Rehabilitation Commission, an advisory body representing the numerous groups concerned with the problem.

Saskatchewan.—Saskatchewan has emphasized development of personal health care services and the integration of public health and medical care for a dispersed rural population. Some programs are decentralized through health regions, medical care districts and hospital districts; most others are centrally administered by the Department of Public Health and several special agencies.

General Public Health.—Full-time community public health services are provided to 65 p.c. of the population through nine health regions, the Northern Administration Health District, and city health departments in Regina and Saskatoon; elsewhere provincial staff supply partial services. Administrative authority in the health regions is vested in regional boards, but public health staff are appointed by the Province; under joint financing arrangements the provincial Health Department pays two-thirds of public health costs in most regions.

The provincial Regional Health Services Branch has the dual function of co-ordinating policies and services within health regions, and supervising the activities of the technical divisions including Sanitation, Nursing Services, Communicable Disease Control, Venereal Disease Control, Nutrition, Child Health and Dental Health. The Provincial Laboratories supply free public health tests through the central laboratory in Regina and operate a mail order clinical testing service for physicians and small hospitals in rural areas.

Hospital and Medical Care.—Under the Saskatchewan Hospital Services Plan, which is a universal compulsory hospital insurance scheme, residents are eligible for in-patient public ward care through the annual prepayment of a personal tax of \$20 by all persons 18 years of age or over, and of \$5 for each dependant under 18 years of age, with a maximum family tax of \$45. Additional funds are provided, from general revenue as needed, including part of the proceeds of a 3 p.c. sales tax. The Medical and Hospital Services Branch is responsible for the operation of the Hospital Service Plan, supervises the operations of the municipal doctor programs and the Air Ambulance Service. It administers a program of health care services to public assistance recipients and their dependants.

The Medical Services Division administers a broad range of medical, dental and optical services and provides drugs (subject to deterrent charges) for public assistance recipients through arrangements with the health professions. Persons and their dependants receiving blindness or mothers' allowances, provincial supplementary allowances to the universal old age pension, certain social aid cases and provincial wards are eligible. The Province pays the full cost and, for most of the eligible cases, the hospital insurance tax as well.

At the local level, municipal doctor plans in about 160 municipalities supply a varying range of medical care benefits to about 170,000 persons, while another 50,000 are covered by the Swift Current Health Region prepaid medical care plan which includes general practitioners and specialist services and dental care for children under 12 years of age. Services are financed by personal and property taxes plus provincial grants.

Mental Health.—The Psychiatric Services Branch operates two mental hospitals, a psychiatric unit in a general hospital and a training school for mentally deficient persons; in addition it administers all community psychiatric services, including three full-time and seven part-time clinics. Free care is given for all mentally ill and mentally defective persons requiring hospitalization.

Tuberculosis.—The tuberculosis control program, operated by the Saskatchewan Anti-Tuberculosis League, includes preventive and case-finding services financed mainly by voluntary subscriptions, and free treatment for both pulmonary and non-pulmonary cases, financed by provincial per diem grants and municipal levies. The League operates three sanatoria as well as mobile and stationary clinics.

Cancer.—The Saskatchewan Cancer Commission co-ordinates all cancer control measures and maintains cancer clinics at Saskatoon and Regina providing free diagnosis and therapy, including surgery.

Venereal Disease.—Four clinics offering free diagnosis and treatment are maintained by the Venereal Disease Control Division.

Dental.—Two health regions operate curative dental programs, employing full-time dentists, and four regions were served by dental hygienists on regional staff.

Rehabilitation.—The Physical Restoration Division is developing medical rehabilitation services for disabled adults and children. Free treatment and rehabilitation services for poliomyelitis patients are provided through two in-patient treatment centres and two physical restoration centres; the latter two centres also serve cerebral palsy and other conditions. Auxiliary services such as transportation and field clinics are supported by the Saskatchewan Council for Crippled Children and Adults, while the Department of Public Welfare and Rehabilitation administers vocational rehabilitation and co-ordinates services.

Alberta.—Basic public health and hospital services are decentralized through local health units, municipal health departments, nursing districts and hospital districts. The Department of Public Health supervises and subsidizes local programs, and administers the various specialized preventive services, specific disease programs, and personal health care for selected groups.

General Public Health.—Eighteen full-time local health units and three full-time city health departments serve 89 p.c. of the population. Partial local services are provided through 29 municipal nursing districts, several provincial sanitary inspection areas and various municipal boards of health in rural areas outside health units.

Health units and municipal health departments are locally controlled but the Province pays 60 p.c. of the cost of approved services. The provincial Division of Local Health Services co-ordinates technical assistance from Sanitary Engineering, Communicable Diseases, Health Education, Nutrition, Vital Statistics and other divisions. Public health bacteriology and tissue pathology tests are available through the Provincial Laboratory; most tests are performed free of charge.

Hospital and Medical Care.—The Division of Hospital and Medical Services provides free hospitalization for maternity patients and administers a program of medical and hospital services for public assistance recipients; it shares with the municipalities in the costs of the Provincial-Municipal Hospital Plan.

Hospitalization, medical, dental, optical and special treatment services are supplied without charge to old age security recipients who qualify for supplementary pension, old age assistance pensioners, blind pensioners, recipients of mothers' allowance and widows' allowance as well as to the dependants of such persons. Medical and related services are provided by agreement with the Alberta College of Physicians and Surgeons and the Dental Association, while hospital care is paid through agreement with the Associated Hospitals of Alberta. The Department of Public Welfare pays 60 p.c. of the cost of medical and hospital care for local indigents through grants to municipalities.

Under provincial supervision the locally operated Provincial-Municipal Hospital Plan provides public ward care and special services to most of the province's population. Costs are distributed between the patient, the municipality and the provincial health department. The patient is charged \$1 a day for public ward care and up to \$1 a day for special services. The remainder of the basic ward rate and the special service rate established for each hospital by provincial regulation is paid by the municipality, which is then reimbursed by the Province for 60 p.c. of this expenditure, or alternatively 50 p.c. if the municipality participates only in the standard ward care program.

Mental Health.—Mental health facilities, administered by the Division of Mental Health, include five mental hospitals, a training school for mental defectives, and community and child guidance clinics. Provincial grants support the operation of two psychiatric units in general hospitals.

Tuberculosis.—Tuberculosis services are administered by the Division of Tuberculosis Control in co-operation with the Alberta Tuberculosis Association. The Division directs diagnostic services and administers two sanatoria; the entire cost of treatment for resident tubercular patients and out-patient pneumothorax is paid by the Province. Mass X-ray surveys and rehabilitation work are functions of the voluntary association.

Cancer.—The Cancer Services Division operates three clinics; on the recommendation of a clinic, surgical, X-ray, radium treatment and hospitalization for diagnostic purposes are provided free of charge for qualified residents requiring such services.

Arthritis and Rheumatism.—For rheumatoid arthritic patients under 25 years of age, the Province bears the cost of hospital care for a period up to 90 days and the cost of medical treatment.

Poliomyelitis.—All residents suffering from poliomyelitis receive free medical, surgical and hospital care and rehabilitation.

Venereal Disease.—Free diagnostic, therapeutic and follow-up services are available for venereal disease cases through stationary and mobile clinics.

Crippled Children.—Two diagnostic and treatment clinics for cerebral palsy are maintained in Calgary and Edmonton; home care instruction is given. Supplementary services for children with other disabling conditions are arranged by voluntary groups.

Rehabilitation.—The co-ordination of rehabilitation services for adults is the responsibility of the Rehabilitation of Disabled Persons Branch in the Department of Public Welfare. Medical rehabilitation services are being developed in the larger general hospitals. A leading facility is the Rehabilitation Clinic for out-patients operated by the Workmen's Compensation Board. Rehabilitation services for alcoholics are offered by the Alcoholism Foundation of Alberta, financed largely by a provincial grant.

British Columbia.—Except for mental health, most health and welfare services in British Columbia are combined in the Department of Health and Welfare, which includes the Health Branch, the Welfare Branch and the Hospital Insurance Service. Various non-governmental agencies conduct health programs which are officially recognized by the Provincial Government. Mental health services are administered by the Department of the Provincial Secretary.

General Public Health.—Full-time local public health services are administered and financed jointly by provincial and local authorities through 16 health units, and by local authorities in the metropolitan areas of Vancouver and Victoria-Esquimalt. Excluding Indians, for whom services are provided by Federal authorities, over 99 p.c. of the Province's population receives public health service from these units. The Provincial Bureau of Social Health Services includes Divisions of Health Units, Public Health Nursing, Public Health Engineering, Environmental Management and Preventive Dentistry. Laboratory services are provided free of charge through the central public health laboratory in Vancouver and branch laboratories in Victoria and Nelson.

Hospital and Medical Care.—Public ward hospital care on a province-wide basis is provided at nominal cost to the patient through the British Columbia Hospital Insurance Service; costs are met from general revenue, provincial sales tax and payment of \$1 by the patient for each day of hospital care. Medical, surgical and optical services, prescribed drugs and limited dental services are provided by the Province to all persons (and their dependants) receiving the universal old age pension or who can qualify for the provincial

supplementary allowance, to recipients (including dependants) of blindness, mothers' or disability allowances or local relief, and to certain child wards. A subsidiary agency of the British Columbia Division, Canadian Medical Association, supplies medical and surgical services to the above categories in return for per capita payments by the Province. The Medical Services Division of the Welfare Branch pays medical premiums and administers and pays for drug, optical, dental and other services; the municipalities contribute 20 p.c. of the cost incurred by their residents. Hospital costs are met by the B.C. Hospital Insurance Service.

Mental Health.—Mental Health services are administered by the Department of the Provincial Secretary. The administrative units include the Essondale Mental Hospital, the Crease Clinic of Psychological Medicine, stationary and travelling child guidance clinics, an out-patient department and day hospital, a training school for mental defectives, the Geriatrics Division and Research Division. The Crease Clinic functions as an investigatory and active treatment centre for short-term patients. Those able to pay are expected to do so, but most of the operating costs of the mental health program are borne by the Province.

Tuberculosis.—Three sanatoria, and several stationary and mobile clinics are in operation. The Province bears most of the cost of treatment services, with some contribution from the municipalities, but patients are expected to pay according to their ability.

Cancer.—Provision for the treatment and control of cancer is the responsibility of the British Columbia Cancer Foundation which maintains treatment centres in Vancouver and Victoria, ten consultative clinics throughout the Province and a boarding home attached to the centre at Vancouver. The Foundation also provides free province-wide biopsy service. The Province subsidizes the Foundation.

Venereal Disease.—Venereal disease clinics offer free diagnosis and treatment.

Dental.—The Division of Preventive Dentistry has launched several programs for children, including grants to dentists in remote areas, to city school dental services and for the development of preventive services in health units. Child dental clinics with local dentists participating are established in more than 60 communities.

Rehabilitation.—Rehabilitation facilities, extensively developed by voluntary organizations for specific disabilities, are co-ordinated through the Health Branch. The G. F. Strong Rehabilitation Centre provides in-patient and out-patient services for severely disabled adults and children. A large out-patient centre is operated by the B.C. Workmen's Compensation Board.

Other Services.—The Province subsidizes agencies concerned with special problems such as the Alcoholism Foundation of British Columbia, the Canadian Arthritis and Rheumatism Society and the Canadian Red Cross Blood Transfusion Service.

The Yukon and Northwest Territories.—Health services in the Yukon and Northwest Territories are provided through a network of services by different government agencies, by the churches and, in some settled areas, by private practitioners. Services for the native population are maintained by the Directorate of Indian Health Services of the Department of National Health and Welfare, for the white population by the Yukon Territorial Government, the Northwest Territories Council, and the Department of Northern Affairs and National Resources, and for the Armed Forces by the Department of National Defence.

There are four general hospitals with a total capacity of 151 beds in the Yukon Territory—hospitals at Whitehorse and Mayo are operated by the Territorial Government; another at Whitehorse is operated by the Department of National Defence; and one at Dawson is operated by the Roman Catholic Church. Of the six private physicians in the Territory, three are employed on a part-time basis as medical health officers by the Territorial Government and one by the Directorate of Indian Health Services. There are three dentists in the Territory, one of whom does part-time work for Indian Health Services.

There are 11 hospitals and eight nursing stations in the Northwest Territories with a combined total of 648 beds, of which about 461 are used for tuberculosis patients. Six hospitals at Aklavik, Chesterfield Inlet, Fort Simpson, Fort Resolution, Fort Smith and Fort Rae are operated by the Roman Catholic Church; two hospitals at Aklavik and Pangnirtung and one nursing station at Hay River are operated by the Anglican Church. The Yellowknife Administrative District operates one hospital and two others are maintained by mining companies at Port Radium and Norman Wells. The Department's Indian Health Services maintains six nursing stations and the Pentecostal Church operates one at Hay River. There are 11 physicians in the territory, nine of whom are employed by Indian Health Services, together with eight public health nurses and two dentists of whom six and one respectively are employed by Indian Health Services.

In the Yukon Territory health services for the non-native population are administered through the Commissioner for the Yukon. The Territorial Government provides complete treatment including transportation for tuberculosis and poliomyelitis patients and hospital care for indigent residents. Grants are made to cover the operating deficits of the two general hospitals owned by the Territorial Government. Public health services provided include communicable disease control, public health nursing, sanitary inspection and tuberculosis case-finding. Technical advice on the public health program is given by a part-time Chief Medical Health Officer resident at Edmonton.

Health programs for the non-native population in the Northwest Territories provide free treatment including transportation for tuberculosis patients, free hospital care for the mentally ill, free treatment for venereal disease cases, and free cancer diagnosis including transportation to the Edmonton Clinic. Indigent residents are eligible for complete medical, dental and optical services as well as general hospital care. There is a special program of free dental services for children under 17 years of age. To support the mission hospitals the Territorial Government pays per diem grants on behalf of all paying patients. Public health services are largely handled by Indian Health Service personnel, the Director of Indian Health Services serving as Chief Medical Health Officer of the Northwest Territories.

Section 2.—Health Statistics

Statistical information on the health of Canadians is at present limited to the well established and highly standardized mortality, communicable disease and institutional statistics series, all of which have been available for a long period. As compared with these records, other national health statistics are still in an early development stage. So far the only source of information on general illness, health services and personal expenditure for health care is the Canadian Sickness Survey of 1950-51. Other projects deal with specific health problems or selected groups of the population and a good deal of statistical information is available from provincial and other health sources. A conference held in April 1957 with wide representation from governments and other interested agencies initiated machinery that will ensure the development of more adequate health statistics than now exist.

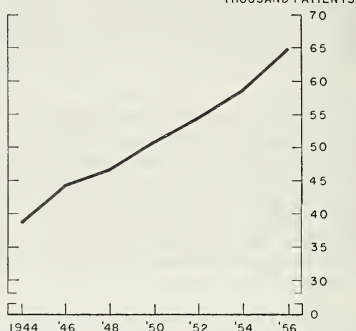
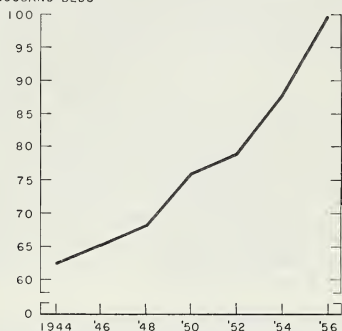
Statistics on causes of death are given in the Chapter on Vital Statistics, pp. 194-232; those on hospital statistics in Subsection 1 following; and those on notifiable diseases in Subsection 3. Subsection 2 deals with certain analyses of the Canadian Sickness Survey and Section 4 with a study of visiting nursing services.

BED CAPACITIES OF, AND PATIENTS IN, HEALTH INSTITUTIONS AT DEC. 31, 1944-56

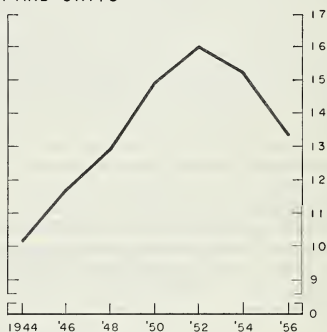
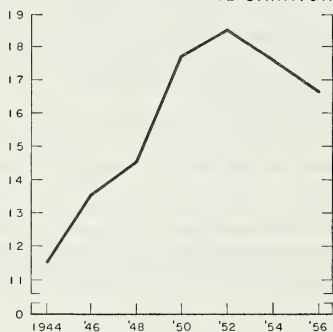
THOUSAND BEDS

PUBLIC HOSPITALS

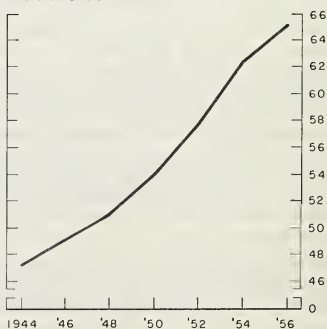
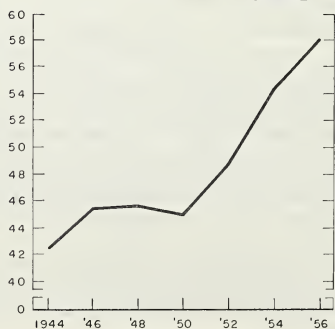
THOUSAND PATIENTS



TB SANATORIA AND UNITS



MENTAL INSTITUTIONS



Subsection 1.—Health Institutions*

The advent of hospital insurance, anticipated for 1959, increased the importance of information relative to the amount of hospital care available in Canada. It is generally assumed that the insurance scheme will increase the amount of care demanded by the public, although the extent of the increase cannot be closely estimated. A fact that should be remembered in considering bed requirements is that a hospital cannot operate effectively with 100 p.c. of its standard capacity fully occupied; an occupancy of 80 p.c. is generally considered the optimum. Thus the addition of 1,000 beds could not be counted on to provide an additional 365,000 days of care per year, but only about 292,000.

At mid-1957, data for 1956 were still outstanding for many hospitals, and consequently over-all information was available only up to the end of 1955. At that point there were 1,360 hospitals known to be in operation in the country, and they had 170,639 beds (not including bassinets for newborn infants). Of this total, 142 hospitals were known to exist but did not submit reports. The remaining 1,218 hospitals, with 167,786 beds, provided at least partial statistical returns which are included in the tables of this Subsection. The capacity of the hospitals which did not report is estimated to be less than 2 p.c. of the total.

Two methods of hospital classification† have been employed in the tabular data. One is based on admission policy and is threefold (public, which admit any patient; private, which admit only paying patients; and federal, which treat special groups). Another axis is type of service provided by the hospital which is fourfold (general, treating a wide range of conditions; special, treating particular conditions such as chronic disease or orthopaedics; mental; and tuberculosis). The last two are kept separate because of their large size and their distinctive characteristics.

Both methods of classification are combined in Table 2 and shown by province. Public general hospitals are the most numerous single group, accounting in 1955 for over half the total number of hospitals in each province except Quebec. The number of beds in such hospitals constituted a majority of the over-all total in Newfoundland, Prince Edward Island, Saskatchewan, Alberta and the Territories, and they were the largest single group in every province except Quebec where there were a few more beds in public mental hospitals. As might be expected, the rank of the provinces in terms of population is the same as their rank in numbers of hospital beds, although not as their rank in numbers of hospitals. Saskatchewan, although fifth in number of population, was second to Ontario in number of public general hospitals.

* Prepared in the Institutions Section of the Health and Welfare Division, Dominion Bureau of Statistics.

† The definitions in this paragraph are abridged from those officially in use. More detailed information is given in DBS publications: *Hospital Statistics 1955*, Vols. I and II; *Mental Health Statistics 1956* and *Financial Supplement*; *Tuberculosis Statistics 1956* and *Financial Supplement*.

2.—Hospitals Reporting and Bed Capacity (excluding Bassinets) classified by Type of Hospital and Type of Service, by Province 1955

Province and Type	General		Special		Mental		Tuberculosis		All Hospitals	
	No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds
Newfoundland	27	1,630	2	124	1	650	2	610	32	3,014
Public.....	27	1,630	2	124	1	650	2	610	32	3,014
Private.....	—	—	—	—	—	—	—	—	—	—
Federal.....	—	—	—	—	—	—	—	—	—	—
Prince Edward Island ..	7	629	—	—	1	300	1	120	9	1,049
Public.....	7	629	—	—	1	300	1	120	9	1,049
Private.....	—	—	—	—	—	—	—	—	—	—
Federal.....	—	—	—	—	—	—	—	—	—	—
Nova Scotia	49	4,310	4	122	17	2,973	5	900	75	8,305
Public.....	43	3,436	3	115	17	2,973	4	879	67	7,403
Private.....	—	—	—	—	—	—	1	21	1	21
Federal.....	6	874	1	7	—	—	—	—	7	881

2.—Hospitals Reporting and Bed Capacity (excluding Bassinets) classified by Type of Hospital and Type of Service, by Province 1955—concluded

Province and Type	General		Special		Mental		Tuberculosis		All Hospitals	
	No.	Beds	No.	Beds	No.	Beds	No.	Beds	No.	Beds
New Brunswick	34	2,730	5	203	2	1,135	5	858	46	4,926
Public.....	31	2,190	3	184	2	1,135	5	858	41	4,367
Private.....	1	11	—	—	—	—	—	—	1	11
Federal.....	2	529	2	19	—	—	—	—	4	548
Quebec	116	19,182	73	5,660	13	16,770	17	4,433	219	46,045
Public.....	93	16,191	23	4,921	12	16,689	16	4,233	144	42,034
Private.....	19	376	49	732	1	81	—	—	69	1,189
Federal.....	4	2,615	1	7	—	—	1	200	6	2,822
Ontario	191	27,476	43	4,252	19	17,192	15	4,272	268	53,192
Public.....	172	23,453	25	3,612	17	16,912	15	4,272	229	48,249
Private.....	11	324	16	325	2	280	—	—	29	929
Federal.....	8	3,699	2	315	—	—	—	—	10	4,014
Manitoba	82	4,918	6	883	4	3,152	6	1,053	98	10,006
Public.....	71	4,017	4	753	4	3,152	3	623	82	8,545
Private.....	6	90	2	130	—	—	—	—	8	220
Federal.....	5	811	—	—	—	—	3	430	8	1,241
Saskatchewan	151	5,935	10	154	3	3,435	3	803	167	10,327
Public.....	145	5,638	5	12	3	3,435	3	803	156	9,888
Private.....	3	5	3	12	—	—	—	—	6	17
Federal.....	3	292	2	130	—	—	—	—	5	422
Alberta	103	7,845	7	398	6	4,229	2	600	118	12,982
Public.....	93	6,649	4	219	—	4,229	2	600	105	11,697
Private.....	5	105	2	19	—	—	—	—	7	124
Federal.....	5	1,091	1	70	—	—	—	—	6	1,161
British Columbia	99	8,790	59	2,204	8	4,922	7	1,313	173	17,229
Public.....	88	7,176	8	691	7	4,852	4	737	107	13,456
Private.....	8	135	48	1,240	1	70	—	—	57	1,445
Federal.....	3	1,479	3	273	—	—	3	576	9	2,328
Yukon and Northwest Territories	13	711	—	—	—	—	—	—	13	711
Public.....	11	690	—	—	—	—	—	—	11	690
Private.....	2	21	—	—	—	—	—	—	2	21
Federal.....	—	—	—	—	—	—	—	—	—	—
Canada	872	84,156	209	13,910	74	54,758	63	14,962	1,218	167,786
Public.....	781	71,639	77	10,631	70	54,327	55	13,735	983	150,592
Private.....	55	1,067	120	2,453	4	431	1	21	180	3,977
Federal.....	36	11,390	12	821	—	—	7	1,206	55	13,417

Public and Private Hospitals.—Table 3 shows that substantial increases in the amount of space available and the amount of care provided in public general and special hospitals occurred over the 1951-55 period. In 1955 there were 858 reporting hospitals—80 more than in 1951, and they had six beds for every five at the beginning of the period. They provided an in-patient bed at some time during 1955 for four out of every 25 Canadians, and gave an average one and two-thirds days of care during the year to every man, woman, child and infant in Canada. No comparable rise occurred in private hospitals.

Table 4 presents data for 1955 on movement of patients and personnel (at the end of 1955 one in every 47 Canadians with a job was employed in a public general or special hospital). Table 5 gives a brief résumé of public hospital finances (gross expenditure amounted to \$20.57 per capita for the year—almost \$330,000,000). Cost per patient-day ranged from \$14.26 in British Columbia and \$12.95 in Ontario to \$11.30 in Newfoundland and \$9.32 in the Territories.

3.—Summary Statistics of Reporting Public and Private General and Special Hospitals 1951-55

Item	1951	1952	1953	1954	1955
	No.	No.	No.	No.	No.
Public General and Special—					
Hospitals reporting.....	778	777	810	817	858
Bed capacity ¹	79,339	78,866	81,752	87,401	95,431
Patients under care ²	2,012,773	2,107,880	2,226,293	2,309,391	2,509,847
Patient-days during year ²	21,920,099	22,331,887	23,075,013	24,278,433	26,047,445
Private General and Special—					
Hospitals reporting.....	220	187	143	169	175
Bed capacity ¹	4,638	3,884	3,271	3,977	4,231
Patients under care ²	67,486	60,432	50,107	62,968	66,096
Patient-days during year ²	1,076,207	992,425	853,324	996,097	1,014,898

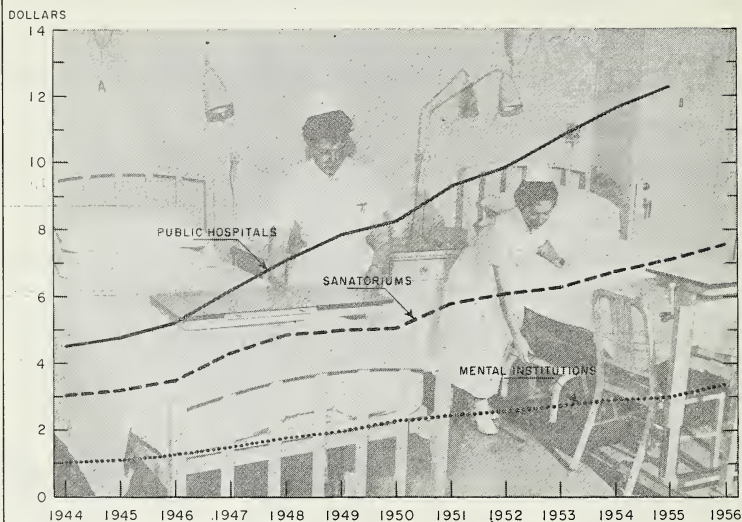
¹ Includes bassinets.² Includes newborn.

4.—Movement of Patients and Number of Personnel of Reporting Public Hospitals by Province 1955

Item	New-foundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	No.	No.	No.	No.	No.	No.
Hospitals reporting.....	29	7	46	34	116	197
Movement of Patients—1						
Admissions.....	43,091	16,071	105,481	91,000	517,428	841,416
Total under care.....	44,369	16,408	107,762	92,695	532,365	862,415
Discharges.....	42,226	15,683	102,992	89,167	504,972	818,549
Deaths.....	864	371	2,399	1,815	12,254	21,860
Patient-days during year.....	543,161	148,895	940,810	760,075	6,523,450	8,829,400
Personnel—2						
Salaried doctors, full-time.....	47	2	16	12	208	161
Interns.....	16	1	63	22	777	703
Graduate nurses.....	264	97	979	667	4,338	9,660
Student nurses.....	300	162	880	642	3,926	5,810
Other personnel.....	1,274	324	2,375	2,093	17,540	26,324
Totals, Personnel.....	1,901	586	4,313	3,436	26,789	42,658
	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.
Hospitals reporting.....	75	150	97	96	11	858
Movement of Patients—1						
Admissions.....	140,249	201,485	238,051	250,637	3,810	2,448,719
Total under care.....	143,609	206,222	242,714	257,041	4,247	2,509,847
Discharges.....	136,799	197,332	233,368	244,135	3,752	2,388,975
Deaths.....	3,413	3,937	4,278	6,509	55	57,755
Patient-days during year.....	1,401,492	1,987,590	2,101,165	2,656,559	154,848	26,047,445
Personnel—2						
Salaried doctors, full-time.....	16	24	24	38	1	549
Interns.....	107	72	127	186	1	2,075
Graduate nurses.....	1,139	1,670	1,899	2,911	50	23,674
Student nurses.....	726	1,279	1,266	1,203	—	16,194
Other personnel.....	3,908	5,242	5,529	7,248	204	72,061
Totals, Personnel.....	5,896	8,287	8,845	11,586	256	114,553

¹ Includes newborn.² Includes part-time personnel except part-time salaried doctors.

ADMINISTRATION COST PER PATIENT-DAY IN HEALTH INSTITUTIONS 1944-56



5.—Finances of Reporting Public Hospitals by Province 1955

Item	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	No.	No.	No.	No.	No.	No.
Hospitals reporting.....	9	7	42	33	106	196
Revenue—	\$	\$	\$	\$	\$	\$
Net earnings from patients.....	1,399,254	1,082,058	7,744,690	7,044,367	60,745,372	93,067,286
Provincial and municipal grants...	2,000,394	159,279	761,304	1,255,243	1,894,008	12,236,758
Other revenue.....	118,581	58,665	332,399	149,664	5,108,141	4,381,037
Totals, Revenue.....	3,518,229	1,300,002	8,838,393	8,449,274	67,747,521	109,685,081
Expenditure—						
Salaries and wages (gross).....	1,864,320	656,861	5,196,840	4,631,799	39,243,411	72,751,764
Direct expense.....	1,973,330	660,615	4,701,716	3,613,814	27,223,589	36,664,749
Other expenditure.....	61,910	196,409	860,171	1,262,380	7,312,794	9,093,426
Totals, Expenditure (gross)...	3,899,560	1,513,885	10,758,727	9,507,993	73,779,794	118,509,939
Cost per patient-day ¹	11.27	9.43	11.76	11.80	11.22	12.95

¹ Includes newborn.

5.—Finances of Reporting Public Hospitals by Province 1955—concluded

Item	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.
Hospitals reporting.....	73	144	89	94	5	798 ²
	\$	\$	\$	\$	\$	\$
Revenue—						
Net earnings from patients.....	12,328,151	21,225,458	19,943,185	33,449,957	420,932	258,450,710
Provincial and municipal grants...	912,363	418,421	3,725,020	1,203,335	6,786	24,572,911
Other revenue.....	389,610	426,449	396,809	1,028,831	62,595	12,452,781
Totals, Revenue.....	13,630,124	22,070,328	24,065,014	35,682,123	490,313	295,476,402
Expenditure—						
Salaries and wages (gross).....	9,289,001	14,820,352	15,307,888	26,705,659	57,469	190,525,364
Direct expense.....	5,086,505	7,564,969	8,597,026	10,823,813	392,024	107,302,150
Other expenditure.....	972,748	1,616,107	1,895,998	1,807,894	64,549	25,144,386
Totals, Expenditure (gross)...	15,348,254	24,001,428	25,800,912	39,337,366	514,042	322,971,900
Cost per patient-day ¹	10.77	11.58	12.34	14.26	9.32	12.25

¹ Includes newborn.

² Sixty public hospitals reporting other information did not report finances.

Mental Institutions.—Four of every thousand Canadians were patients in the country's 104 mental institutions at the end of 1956. The number of patients was 65,107, a figure 1,424 above the 1955 year-end total and almost double the 33,000 of 1932, when records were begun. Annual data from 1948 onward show continuous numerical advances, although the accelerated population increase in 1954, 1955 and 1956 produced slight declines in the rate per 100,000 population. The data on mental institutions, except for staff, include psychiatric units in other hospitals.

Since bed capacity stood at 58,014 at the end of 1956, a net overcrowding of 7,093 patients or 12.2 p.c. is indicated. A year before, this margin had been 6,674 or 11.7 p.c. The admission (first and re-admission) rate was higher than ever during 1956, having risen by just over 10 p.c. in one year. For every 32 persons who went from the 'outside' to a mental institution in 1955, 36 entered in 1956. As recently as 1950 there had been only 16. Much of this increase is undoubtedly accounted for by the increase in the number of psychiatric units with small capacities and high patient turnover rates.

The ratio of staff to patients reached a new high in 1956. Mental hospitals at the end of 1956 had 20,598 full-time personnel—2,055 more than in 1955—representing 32 employees for every 100 patients. Psychiatric units are not included in these figures because of the difficulty of segregating their maintenance staffs; psychiatric units ordinarily utilize the services of their parent hospital.

6.—Summary Statistics of Mental Institutions, Selected Years 1932-56

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
MENTAL HOSPITALS AND PSYCHIATRIC UNITS ¹ REPORTING											
1932.....	..	1	18	1	9	16	4	2	3	4	58
1936.....	..	1	16	1	9	16	4	2	4	4	57
1940.....	..	1	17	1	9	17	4	2	5	4	60
1944.....	..	1	17	1	9	16	4	2	5	4	59
1949.....	1	1	18	1	9	17	4	4	5	4	64
1952.....	1	1	18	1	15	20	4	4	6	5	75
1954.....	1	1	18	3	15	29	6	4	8	11	96
1955.....	1	1	18	4	15	28	6	5	8	11	97
1956.....	1	2	18	4	19	29	6	6	8	11	104

¹ Includes 19 in 1954, 23 in 1955 and 27 in 1956.

6.—Summary Statistics of Mental Institutions, Selected Years 1932-56—continued

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
PATIENTS IN INSTITUTIONS AT DEC. 31											
1932.....	..	262	1,525	883	9,439	11,626	2,329	2,561	1,870	2,795	33,290
1936.....	..	260	2,024	1,006	11,472	13,574	2,669	3,133	2,430	3,265	39,833
1940.....	..	267	2,182	1,146	12,841	14,553	2,819	3,767	2,755	3,833	44,163
1944.....	..	274	2,236	1,285	14,074	15,140	3,024	4,169	3,069	4,008	47,279
1949.....	676	292	2,313	1,397	15,316	17,260	3,165	4,447	3,169	4,628	52,663
1952.....	779	303	2,410	1,686	16,971	18,710	3,378	4,572	3,780	5,030	57,621
1954.....	903	297	2,872	1,734	17,495	20,132	3,676	4,653	4,275	6,288	62,323
1955.....	920	309	2,953	1,847	17,734	20,657	3,707	4,644	4,453	6,459	63,683
1956.....	952	481	2,902	1,828	18,663	21,172	3,681	4,577	4,466	6,385	65,107
PATIENTS PER 100,000 POPULATION											
1932.....	..	294.4	293.8	213.3	322.7	334.8	330.4	277.2	252.7	395.3	317.2
1936.....	..	279.6	372.7	232.3	370.2	376.5	375.3	336.3	314.4	438.1	364.3
1940.....	..	281.1	383.5	253.5	391.7	388.4	387.2	418.6	348.7	476.1	388.6
1944.....	..	301.1	366.0	278.7	402.1	382.0	416.0	498.7	379.8	430.0	396.3
1949.....	195.9	310.6	367.7	275.0	394.5	394.2	418.1	534.5	358.1	415.8	392.3
1952.....	208.3	303.0	369.4	320.5	406.6	390.8	423.3	542.3	388.5	417.4	399.2
1954.....	228.6	294.1	426.4	321.1	398.7	393.6	446.7	533.0	404.4	485.6	408.4
1955.....	226.6	309.0	432.4	337.7	392.6	392.3	441.8	528.9	408.2	481.3	406.4
1956.....	229.3	484.4	417.7	329.6	403.2	391.7	433.1	519.7	397.6	456.6	405.7
BED CAPACITY											
1932.....	..	300	1,951	900	8,875	11,666	2,249	2,450	1,875	2,685	32,951
1936.....	..	275	2,126	1,025	11,484	13,050	2,272	2,600	2,092	2,455	37,379
1940.....	..	275	2,474	1,160	11,916	13,617	2,348	2,700	2,494	2,457	39,441
1944.....	..	275	2,546	1,150	13,150	14,497	2,578	2,970	2,873	2,461	42,500
1949.....	530	250	2,346	1,100	13,732	14,290	2,477	3,711	2,558	3,061	44,055
1952.....	530	250	2,672	1,100	16,280	15,415	2,577	2,928	3,506	3,635	48,893
1954.....	526	300	3,099	1,131	16,487	17,008	3,508	3,100	4,197	4,990	54,346
1955.....	650	300	2,995	1,150	17,471	18,391	3,237	3,508	4,296	5,011	57,009
1956.....	650	486	2,989	1,151	17,910	18,409	3,452	3,530	4,418	5,019	58,014
BED CAPACITY PER 100,000 POPULATION											
1932.....	..	337.1	375.9	217.4	303.4	335.8	319.0	265.2	253.4	379.8	313.9
1936.....	..	295.7	391.5	236.7	370.6	361.9	319.5	279.1	270.7	329.4	341.9
1940.....	..	289.5	434.8	256.7	363.7	363.4	322.5	300.0	315.7	305.2	347.1
1944.....	..	302.2	416.7	249.5	375.7	365.8	354.6	355.3	355.6	264.1	356.3
1949.....	153.6	266.0	373.0	216.5	353.7	326.4	327.2	446.0	289.0	275.0	328.2
1952.....	141.7	250.0	409.2	209.1	390.0	322.0	322.9	347.3	360.3	301.7	338.7
1954.....	133.2	297.0	460.5	209.4	375.7	332.5	426.2	355.1	397.1	385.3	356.1
1955.....	160.1	300.0	438.5	210.2	386.8	349.2	385.8	399.5	393.8	373.4	363.8
1956.....	156.6	489.4	430.3	207.5	387.0	340.6	406.1	400.8	393.4	358.9	361.5
FIRST ADMISSIONS AND RE-ADMISSIONS											
1932.....	..	89	418	180	2,504	3,756	668	626	520	695	9,456
1936.....	..	97	433	273	3,027	4,228	599	775	781	910	11,123
1940.....	..	85	488	333	3,203	3,578	564	744	600	928	9,823
1944.....	..	112	617	414	3,317	4,118	716	725	658	1,122	11,799
1949.....	174	104	666	492	3,410	5,339	793	1,269	857	2,372	15,476
1952.....	322	182	848	677	5,936	6,240	924	1,496	1,185	3,147	20,957

6.—Summary Statistics of Mental Institutions, Selected Years 1932-56—concluded

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
FIRST ADMISSIONS AND RE-ADMISSIONS—concluded											
1954.....	282	210	1,541	685	6,698	9,182	1,611	1,603	2,214	5,325	29,351
1955.....	255	187	1,671	1,020	7,308	10,078	1,571	1,748	2,633	5,751	32,222
1956.....	267	217	1,659	992	10,396	10,827	1,684	2,129	2,546	5,721	36,438
ADMISSIONS PER 100,000 POPULATION											
1932.....	..	100.0	80.5	43.5	85.6	108.1	94.7	67.7	70.3	98.3	90.1
1936.....	..	104.3	79.7	63.0	97.7	117.3	84.2	83.2	101.1	122.1	101.7
1940.....	..	89.5	85.8	73.7	76.4	95.5	77.5	82.7	75.9	115.3	86.4
1944.....	..	123.1	101.0	89.8	94.8	103.9	98.5	86.7	81.4	120.4	98.9
1949.....	50.4	110.6	105.9	96.9	87.8	122.0	104.8	152.5	96.8	213.1	115.3
1952.....	86.1	182.0	129.9	128.7	142.2	130.3	115.8	177.5	121.8	261.2	145.2
1954.....	71.4	207.9	229.0	126.9	152.6	179.5	195.7	183.6	209.5	411.2	192.3
1955.....	62.8	187.0	244.7	186.5	161.8	191.4	187.2	199.1	241.3	428.5	205.6
1956.....	64.3	218.5	238.8	178.9	224.6	200.3	198.1	241.7	226.7	409.1	227.0
FULL-TIME PERSONNEL ¹											
1932.....	..	58	305	83	1,592	2,723	526	403	344	524	6,558
1936.....	..	69	316	128	2,232	2,661	533	471	423	592	7,430
1940.....	..	64	357	171	2,177	3,317	648	731	503	721	8,689
1944.....	..	65	351	159	2,279	3,248	617	723	567	897	8,906
1949.....	267	78	476	274	2,871	4,498	794	1,253	853	1,448	12,812
1952.....	338	101	598	349	3,479	5,659	820	1,332	1,161	1,919	15,756
1954.....	397	107	629	507	3,776	7,108	1,036	1,301	1,406	2,294	18,561
1955.....	426	98	644	522	3,812	6,800	1,000	1,406	1,496	2,339	18,543
1956.....	457	146	746	560	4,177	7,804	1,073	1,495	1,559	2,581	20,598
FULL-TIME PERSONNEL PER 100 PATIENTS AT DEC. 31 ¹											
1932.....	..	22.1	20.0	9.4	16.9	23.4	22.6	15.7	18.4	18.7	19.7
1936.....	..	26.5	15.6	12.7	19.5	19.6	20.2	15.0	17.4	18.1	18.7
1940.....	..	24.0	16.4	14.9	17.0	22.8	23.0	19.4	18.3	18.8	19.7
1944.....	..	23.7	15.7	12.4	16.2	21.5	20.4	17.3	18.5	22.4	18.8
1949.....	39.5	26.7	20.6	19.6	18.7	26.1	25.1	28.2	26.9	31.3	24.3
1952.....	43.4	33.3	24.8	20.7	20.5	20.2	24.3	29.1	30.7	35.2	27.3
1954.....	46.6	41.1	24.0	31.0	23.4	36.9	29.4	28.4	33.5	37.7	31.2
1955.....	46.3	31.7	22.0	28.4	22.4	34.7	27.6	30.6	34.0	36.6	30.1
1956.....	48.0	30.4	25.9	30.8	22.8	37.3	29.8	33.0	35.1	40.9	32.0
COST PER PATIENT-DAY ²											
1932.....	..	0.92	0.72	0.64	0.50	1.11	0.96	0.89	1.28	1.10	0.88
1936.....	..	1.18	0.71	0.68	0.62	0.87	0.85	0.94	0.93	0.94	0.80
1940.....	..	1.32	0.78	0.89	0.67	1.06	0.99	1.02	0.94	1.06	0.92
1944.....	..	1.69	0.93	1.05	0.83	1.17	1.04	1.10	1.05	1.19	1.03
1949.....	2.74	2.32	1.67	1.81	1.30	2.18	1.83	2.42	2.17	3.01	1.94
1952.....	4.29	2.79	2.11	2.15	1.63	2.91	2.22	2.89	2.74	3.87	2.53
1954.....	4.81	3.31	2.11	3.03	1.98	3.21	2.73	3.27	3.24	4.15	2.92
1955.....	5.17	3.44	2.11	3.01	1.83	3.31	2.79	3.93	3.39	4.29	2.97
1956.....	5.35	3.98	2.47	3.46	2.19	..	3.02	3.95	3.78	4.69	3.35

¹ Excludes personnel of psychiatric units.
Government and psychiatric units of general hospitals.

² Excludes institutions under jurisdiction of the Federal

7.—Finances of Reporting Mental Institutions by Province 1956

Item	Newfoundland	Prince Edward Island	Nova Scotia ¹	New Brunswick	Quebec	Ontario
	\$	\$	\$	\$	\$	\$
Revenue	1,837,650	433,971	2,663,126	2,318,731	13,928,497	28,448,269
Government and municipal payments.....	1,789,395	336,493	2,292,758	2,037,473	11,432,243	23,875,655
Paying patients.....	48,255	97,478	296,518	279,685	1,601,134	4,070,064
Other sources.....	—	—	73,850	1,573	895,120	502,550
Expenditure	1,837,650	433,971	2,639,299	2,318,731	13,507,505	28,383,113
Salaries (net).....	893,988	189,876	1,305,005	1,483,322	6,193,792	18,223,891
Provisions (food).....	484,140	94,675	597,792	402,715	2,562,905	3,603,236
Other maintenance expenditure....	459,522	149,420	736,502	432,694	4,750,808	6,555,986
	Manitoba	Saskatchewan	Alberta	British Columbia ²	Yukon and N.W.T.	Canada
	\$	\$	\$	\$	\$	\$
Revenue	4,161,711	6,908,410	6,223,062	10,921,728	—	77,845,155
Government and municipal payments.....	3,626,331	6,718,062	5,306,009	9,772,086	—	67,186,505
Paying patients.....	480,680	138,794	714,731	1,147,470	—	8,874,809
Other sources.....	54,700	51,554	202,322	2,172	—	1,783,841
Expenditure	4,052,960	6,608,386	6,223,062	10,937,355	—	76,942,032
Salaries (net).....	2,445,740	4,477,715	4,236,551	6,125,741	—	45,575,621
Provisions (food).....	772,606	708,982	808,598	2,202,491	—	12,238,140
Other maintenance expenditure....	834,614	1,421,689	1,177,913	2,609,123	—	19,128,271

¹ Includes 1955 data for two hospitals that did not report later data.

² Includes 1955-56 data for seven hospitals that did not report later data.

Tuberculosis Sanatoria and Units.—The effects of the development of new therapeutic techniques were in evidence at the end of 1956. At that point the number of beds devoted to care of the tuberculous in Canada was only 16,678, a drop of 1,005 in two years. Table 8 shows the provincial distribution of the bed complement and its location in various types of institution. Table 9 provides information on patients, personnel and facilities. Patient-days were down by 11.7 p.c. from 5,947,030 in 1954 to 5,250,555 in 1956, and personnel (in sanatoria only) dropped 10.4 p.c. from 10,864 to 9,739. Finances of public sanatoria are covered briefly in Table 10.

8.—Bed Complement of Tuberculosis Sanatoria and Units by Province 1956

Item	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Public sanatoria.....	730	92	853	832	4,144	4,207	622	803	586	655	—	13,524
Federal Government sanatoria.....	—	—	—	—	—	—	497	—	—	539	—	1,036
Units in public hospitals....	75	—	124	—	385	—	—	—	—	221	319	1,124
Units in Federal Government hospitals.....	—	—	95	26	270	206	—	62	335	—	—	994
Totals, Bed Complement	805	92	1,072	858	4,799	4,413	1,119	865	921	1,415	319	16,678

9.—Movement of Patients, Personnel and Facilities of Tuberculosis Sanatoria and Units by Province 1956

Item	New- foundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	No.	No.	No.	No.	No.	No.
Movement of Patients—						
Admissions.....	965	81	1,958	1,287	7,310	4,740
Discharges ¹	1,056	83	2,063	1,315	7,158	4,745
Deaths.....	49	1	35	41	347	249
Patients under care.....	1,757	172	2,502	1,839	10,830	7,651
Collective stay in days.....	267,464	33,382	271,058	246,370	1,617,030	1,358,614
Personnel—²						
Salaried doctors.....	18	2	35	26	193	98
Graduate nurses.....	54	13	117	89	260	389
Other personnel.....	480	75	605	490	1,858	2,131
Totals, Personnel.....	552	90	757	605	2,311	2,618
Hospital Facilities—²						
X-ray.....	2	—	4	5	15	12
Clinical laboratory.....	2	1	3	3	14	14
Physiotherapy.....	1	—	2	—	8	2
	Manitoba	Saskat- chewan	Alberta	British Columbia	Northwest Territories	Canada
	No.	No.	No.	No.	No.	No.
Movement of Patients—						
Admissions.....	1,596	845	883	1,480	123	21,268
Discharges ¹	1,560	886	915	1,584	193	21,558
Deaths.....	51	39	42	99	6	959
Patients under care.....	2,264	1,422	1,716	2,705	335	33,193
Collective stay in days.....	362,092	269,258	288,863	462,634	73,790	5,250,555
Personnel—²						
Salaried doctors.....	17	17	19	35	—	460
Graduate nurses.....	58	65	81	207	—	1,333
Other personnel.....	601	489	337	880	—	7,946
Totals, Personnel.....	676	571	437	1,122	—	9,739
Hospital Facilities—²						
X-ray.....	5	—	1	3	—	47
Clinical laboratory.....	5	3	2	4	—	51
Physiotherapy.....	2	1	1	1	—	18

¹ Excludes deaths.² Sanatoria only.

10.—Finances of Public Tuberculosis Sanatoria by Province 1956

(Exclusive of Federal Government sanatoria)

Item	New- foundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	No.	No.	No.	No.	No.	No.
Sanatoria reporting.....	2	1	5	5	16	15
Revenue—	\$	\$	\$	\$	\$	\$
Government and municipal grants and payments.....	1,816,031	203,635	2,060,116	2,084,397	6,148,373	6,062,707
Paying patients.....	—	4,203	—	14,564	319,462	76,258
Other sources.....	46,317	68,887	125,499	102,104	1,167,373	3,542,295
Totals, Revenue.....	1,862,348	276,725	2,185,615	2,201,065	7,635,208	9,681,260
Expenditure—						
Salaries and wages.....	913,476	132,997	1,232,187	1,211,716	3,816,197	5,278,136
Supplies.....	681,324	122,574	691,619	557,411	2,187,278	1,989,789
Other expenditure.....	267,548	21,154	293,352	476,798	1,952,864	1,876,546
Totals, Expenditure.....	1,862,348	276,725	2,217,158	2,245,925	7,956,339	9,144,471
Cost per patient-day.....	7.99	8.29	10.73	9.48	5.77	6.91

10.—Finances of Public Tuberculosis Sanatoria by Province 1956—concluded

Item	Manitoba	Saskatchewan	Alberta	British Columbia ¹	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.
Sanatoria reporting	3	3	2	4	—	56
Revenue—	\$	\$	\$	\$	\$	\$
Government and municipal grants and payments	877,284	1,416,707	1,706,315	2,940,327	—	25,315,892
Paying patients	928	—	2,414	73,377	—	491,206
Other sources	211,242	594,234	233,226	293,408	—	6,384,585
Totals, Revenue	1,089,454	2,010,941	1,941,955	3,307,112	—	32,191,653
Expenditure—						
Salaries and wages	677,059	1,328,911	1,402,269	2,316,234	—	18,309,182
Supplies	282,297	431,430	447,351	588,588	—	7,979,661
Other expenditure	245,051	86,593	92,335	402,290	—	5,714,531
Totals, Expenditure	1,204,407	1,846,934	1,941,955	3,307,112	—	32,003,374
Cost per patient-day	6.34	7.58	10.51	15.80	—	7.55

¹ Includes all institutions operated by the Provincial Division of Tuberculosis Control.

Federal Government Hospitals.—Under the terms of the British North America Act, health and welfare is the special responsibility of the provinces. Nevertheless the Federal Government is responsible for the health of certain groups such as war veterans and members of the Armed Forces, newly arrived immigrants, Indians and Eskimos, and lepers. The Federal hospitals are administered by three departments of government: in 1955 the Department of Veterans Affairs administered 19; the Department of National Defence, 8; the Department of National Health and Welfare's Indian and Northern Health Services, 18; and the Department of National Health and Welfare's Quarantine, Immigration Medical, and Sick Mariners' Services, 10. Certain hospitals of the Department of National Defence are not included in the figures of Table 11.

11.—Summary Statistics of Federal Government Hospitals 1955

Item	Department of Veterans Affairs	Department of National Defence	Department of National Health and Welfare		Total
			Indian and Northern Health Services	Quarantine, Immigration Medical, and Sick Mariners' Services ¹	
	No.	No.	No.	No.	No.
Hospitals reporting	19	8	18	10	55
Beds—²					
General	5,422	775	595	112	6,904
Tuberculosis	677	—	1,598	200	2,475
Mental	1,509	—	—	—	1,509
Other	2,429	—	—	100	2,529
Totals, Beds	10,037	775	2,193	412	13,417

¹ Data for movement of patients are for the year ended Mar. 31, 1955.

² Excludes bassinets.

11.—Summary Statistics of Federal Government Hospitals 1955—concluded

Item	Department of Veterans Affairs	Department of National Defence	Department of National Health and Welfare		Total
			Indian and Northern Health Services	Quarantine, Immigration, Medical, and Sick Mariners' Services ¹	
	No.	No.	No.	No.	No.
Personnel—					
Salaried doctors.....	129	81	56	24	290
Graduate nurses.....	1,470	161	349	50	2,030
Other personnel.....	7,033	683	1,374	141	9,231
Totals, Personnel.....	8,632	925	1,779	215	11,551
Facilities—					
Laboratory.....	14	8	18	9	49
Radiology.....	14	8	18	5	45
Physiotherapy.....	19	7	3	2	31
Out-patient service.....	15	8	16	9	48
Movement of Patients—					
In hospital at beginning of year.....	7,265	501	1,985	49	9,800
Admissions.....	54,912	18,523	11,183	814	85,432
Totals, Under Care.....	62,177	19,024	13,168	863	95,232
Discharges.....	52,973	18,621	11,108	831	83,533
Deaths.....	2,299	26	181	—	2,506
In hospital at end of year.....	6,905	377	1,879	32	9,193
Patient-days during year.....	2,883,530	281,081	702,118	13,838	3,880,567
Average daily number of patients.....	7,900.1	770.1	1,923.6	37.9	10,631.7
Percentage occupancy.....	78.7	99.4	87.7	9.0	79.2

Subsection 2.—Canadian Sickness Survey, 1950-51*

A brief outline of the scope and methods of the Canadian Sickness Survey, a co-operative effort of federal and provincial departments, is given in the 1955 Year Book and some of the results of that Survey were published in the 1955 and 1956 editions. Study of the data still continues, the results being regularly published in a series of bulletins. During the year 1957 further results of the Survey became available, shedding for the first time some light on the frequency of various diseases in the population.

Incidence of Illness in Canada during the Survey Year.—Tables 12 and 13 show the estimated rates per 1,000 population of the incidence of illness as experienced by the Canadian population during 1950-51. The incidence includes all new illnesses that commenced within the survey year. Table 12 shows separate rates for 83 diagnostic groups, based on the International Statistical Classification of Diseases, Injuries and Causes of Death. Table 13 shows rates and percentages for 14 major diagnostic classes by age groups.

* Prepared in the Public Health Section of the Health and Welfare Division, Dominion Bureau of Statistics.

12.—Rates per 1,000 Population and Percentages of New Illnesses Reported, classified according to the International Standard Classification of Diseases, Injuries and Causes of Death, Survey Year 1950-51.

Int. List No.	Class of Illness and Diagnostic Group	Estimated New Illnesses Reported per 1,000 Population	P.C. of All New Illnesses Reported	P.C. of Respective Class
001-138	Infective and Parasitic Diseases	115.7	5.19	100.0
050-053	Scarlet fever, streptococcal sore throat, erysipelas, septicæmia, pyæmia.....	7.8	0.35	6.8
056	Whooping cough.....	6.9	0.31	5.9
001-019, 040-049, 054, 055, 057-074	Other bacterial diseases (tuberculosis, dysentery, food poisonings, and others).....	5.8	0.26	5.0
085	Measles.....	34.4	1.54	29.8
086	Rubella (German measles).....	5.6	0.25	4.8
087	Chickenpox.....	19.4	0.87	16.8
089	Mumps.....	20.6	0.93	17.8
126-130	Infestations with worms.....	5.8	0.26	5.0
131-137	Fungus infections and arthropod infections.....	3.9	0.17	3.4
020-039, 080-084, 088, 090-125, 138	Other infective and parasitic diseases.....	5.5	0.24	4.7
140-239	Neoplasms	5.3	0.24	100.0
240-289	Allergic, Endocrine, Metabolic and Nutritional Diseases	10.9	0.49	100.0
240	Hay fever.....	..	..	..
241	Asthma.....	..	..	..
242-245	Urticaria and other allergic disorders.....	5.7	0.25	52.3
250-289	Thyroid disorders, diabetes and other endocrine, metabolic and nutritional disorders.....	..	..	..
290-299	Diseases of the Blood and Blood-forming Organs	5.3	0.24	100.0
290-299	Anæmias and other diseases of the blood and blood-forming organs.....	5.3	0.24	100.0
330-398	Diseases of the Nervous System and Sense Organs	73.4	3.29	100.0
354	Migraine.....	..	..	..
330-353, 355-357	Vascular lesions, epilepsy, and other diseases of the brain and spinal cord.....	..	..	..
360-369	Neuralgia and neuritis.....	8.6	0.38	11.7
370	Conjunctivitis and ophthalmia.....	3.8	0.17	5.2
371-379	Hordeolum and other inflammatory eye diseases... ..	19.0	0.85	26.0
380-389	Other diseases of the eye.....	5.0	0.22	6.8
390-393	Otitis and mastoiditis.....	4.8	0.21	6.5
394-398	Other diseases of the ear.....	27.6	1.24	37.7
400-468	Diseases of the Circulatory System	20.9	0.93	100.0
400-434	Diseases of heart without hypertension, rheumatic fever.....	7.7	0.34	36.8
440-447	Hypertensive disease.....	4.2	0.19	20.0
460	Varicose veins of lower extremities.....	..	..	..
461-466	Hæmorrhoids, phlebitis and other diseases of veins.....	3.7	0.17	17.7
450-456, 467, 468	Arterial diseases and other diseases of the circulatory system.....	4.3	0.19	20.6
470-527	Diseases of the Respiratory System	1,310.1	58.70	100.0
470	Acute nasopharyngitis (common cold).....	659.9	29.54	50.4
472	Acute pharyngitis.....	68.5	3.07	5.2
473, 511	Acute tonsillitis, peritonsillar abscess (quinsy).....	9.5	0.43	0.7
474	Acute laryngitis and tracheitis.....	7.1	0.32	0.5
475	Acute upper respiratory infection of multiple or unspecified sites.....	23.6	1.06	1.8
180, 481, 483	Influenza with respiratory and nervous manifestations, and influenza unqualified.....	423.7	18.99	32.3
482	Influenza with digestive manifestations.....	46.9	2.10	3.6
490-493	Pneumonia.....	10.4	0.46	0.8
500-502	Bronchitis.....	32.4	1.45	2.5
510	Hypertrophy of tonsils and adenoids.....	10.0	0.45	0.8
513	Chronic sinusitis.....	6.2	0.28	0.5
471, 512, 514-527	Pleurisy and other diseases of lungs and upper respiratory tract, and pleural cavity.....	11.7	0.53	0.9

12.—Rates per 1,000 Population and Percentages of New Illnesses Reported, classified according to the International Standard Classification of Diseases, Injuries and Causes of Death, Survey Year 1950-51—continued.

Int. List No.	Class of Illness and Diagnostic Group	Estimated New Illnesses Reported per 1,000 Population	P.C. of All New Illnesses Reported	P.C. of Respective Class
530-587	Diseases of the Digestive System.....	165.2	7.40	100.0
530, 534	Toothache and dental caries.....	26.0	1.17	15.8
531, 532, 535 } 533	Abscesses and other diseases of teeth and supporting structures.....	4.9	0.22	2.9
536-539	Disorders of occlusion, eruption and tooth development.....	11.7	0.53	7.1
540-542	Stomatitis and other diseases of buccal cavity and oesophagus.....	5.1	0.23	3.1
543-545	Ulcer of stomach and duodenum.....	..	..	..
550-553, 560-561, 570 } 571	Disorders of function of stomach and other diseases of stomach and duodenum.....	79.8	3.57	48.3
572-578	Diseases of appendix, herniæ, intestinal obstruction.....	9.0	0.40	5.4
580-587	Gastro-enteritis and colitis except ulcerative, age 4 weeks or over.....	8.7	0.39	5.2
	Functional disorders and other diseases of the intestines and peritoneum.....	6.6	0.29	4.0
	Diseases of liver, gallbladder and pancreas.....	11.3	0.50	6.8
590-637	Diseases of the Genito-Urinary System.....	32.1	1.44	100.0
600-603	Diseases of the kidney and ureter.....	10.1	0.45	31.4
590-594, 604-609 } 610-637	Other diseases of urinary system.....	6.3	0.28	19.6
	Diseases of genital organs.....	15.7	0.70	49.0
640-689	Deliveries and Complications of Pregnancy, Child-birth and the Puerperium.....	32.3	1.45	100.0
660	Delivery without complication.....	23.2	1.04	71.8
640-652, 670-689 } 670-689	Complications of pregnancy, childbirth and puerperium.....	9.1	0.41	28.2
690-716	Diseases of the Skin and Cellular Tissue.....	46.0	2.06	100.0
690	Boils and carbuncles.....	15.0	0.67	32.6
691-695	Cellulitis and impetigo.....	7.0	0.31	15.1
696-698	Other local skin infections.....	10.5	0.47	22.9
701	Eczema.....	4.1	0.18	8.9
700, 702-716 } 716	Other skin diseases.....	9.4	0.42	20.5
720-749	Diseases of the Bones and Organs of Movement...	24.8	1.11	100.0
720-725	Arthritis.....	..	..	..
726	Muscular rheumatism.....	11.4	0.51	45.8
727	Rheumatism, unspecified.....	7.4	0.33	29.9
730-749	Other diseases of bones, joints, and musculoskeletal system.....	4.3	0.19	17.3
300-326, 750-776 } 750-776	Other Diseases.....	..	..	..
780-795	Symptoms, Senility and Ill-defined Conditions...	257.3	11.53	100.0
780, 781	Symptoms referable to nervous system and special senses.....	8.3	0.37	3.2
782	Symptoms referable to cardiovascular and lymphatic system.....	7.8	0.35	3.1
783	Symptoms referable to respiratory system.....	29.7	1.33	11.5
784	Symptoms referable to upper gastro-intestinal tract.....	12.9	0.58	5.0
785	Symptoms referable to abdomen and lower gastro-intestinal system.....	30.8	1.38	12.0
787	Symptoms referable to limbs and back.....	52.2	2.34	20.3
790	Nervousness and debility.....	18.5	0.83	7.2
791	Headaches.....	66.1	2.96	25.7
786, 788, 789, 792-795 } 792-795	Other ill-defined symptoms and conditions.....	31.1	1.39	12.1

12.—Rates per 1,000 Population and Percentages of New Illnesses Reported, classified according to the International Standard Classification of Diseases, Injuries and Causes of Death, Survey Year 1950-51—concluded.

Int. List No.	Class of Illness and Diagnostic Group	Estimated New Illnesses Reported per 1,000 Population	P.C. of All New Illnesses Reported	P.C. of Respective Class
N800-N999	Injuries, Poisonings and Violence.....	129.1	5.79	100.0
N800-N829	Fractures.....	13.1	0.59	10.2
N830-N848	Dislocations, sprains and strains.....	22.9	1.03	17.8
N870-N908	Lacerations and open wounds.....	29.7	1.33	23.0
N910-N918	Superficial injury.....	7.0	0.31	5.4
N920-N929	Contusion and crushing with intact skin surface.....	19.3	0.86	14.9
N940-N949	Burns.....	8.8	0.40	6.8
N850-N869, N930-N936, N950-N999	Other and unspecified effects of external cause including foreign bodies and poisoning.....	28.3	1.27	21.9
All Illnesses.....		2,231.7	100.00	...

13.—Rates per 1,000 Population and Percentage Distribution of New Illnesses Reported, by Major Diagnostic Class and by Age Group, Survey Year 1950-51

Diagnostic Class	Under 15 Years	15-24 Years	25-44 Years	45-64 Years	65 Years or Over	All Ages
ESTIMATED NEW ILLNESSES PER 1,000 POPULATION						
Infective and Parasitic Diseases.....	307.2	58.7	28.7	20.2		115.7
Neoplasms.....	..	..	..	..	..	5.3
Allergic, Endocrine, Metabolic and Nutritional Diseases.....	12.8	..	..	..	..	10.9
Diseases of the Blood and Blood-forming Organs.....	..	..	..	..	..	5.3
Diseases of the Nervous System and Sense Organs.....	115.2	45.5	54.4	56.0	74.3	73.4
Diseases of the Circulatory System.....	..	..	25.5	36.3	49.6	20.9
Diseases of the Respiratory System.....	1,787.8	1,033.5	1,253.8	983.0	939.4	1,310.1
Diseases of the Digestive System.....	237.6	136.8	145.9	116.5	120.8	165.2
Diseases of the Genito-Urinary System.....	12.2	..	49.7	40.2	..	32.1
Deliveries and Complications of Pregnancy, Childbirth and the Puerperium.....	..	61.6	78.9	..	—	32.3
Diseases of the Skin and Cellular Tissue.....	64.7	39.4	43.2	30.5	..	46.0
Diseases of the Bones and Organs of Movement.....	8.6	..	31.5	45.3	48.0	24.8
Symptoms, Senility and Ill-defined Conditions.....	268.3	190.5	284.0	248.5	265.8	257.3
Injuries, Poisonings and Violence.....	148.7	117.6	127.8	118.3	104.9	129.1
All Classes.....	2,978.3	1,753.6	2,151.8	1,726.3	1,700.6	2,231.7
PERCENTAGE DISTRIBUTION OF NEW ILLNESSES IN EACH CLASS						
Infective and Parasitic Diseases.....	80.7	7.7	7.1	4.5		100.0
Neoplasms.....	..	..	..	..	..	100.0
Allergic, Endocrine, Metabolic and Nutritional Diseases.....	53.9	..	..	..	..	100.0
Diseases of the Blood and Blood-forming Organs.....	..	..	..	..	..	100.0
Diseases of the Nervous System and Sense Organs.....	47.7	9.4	21.4	13.6	7.9	100.0
Diseases of the Circulatory System.....	..	..	35.2	31.0	18.5	100.0
Diseases of the Respiratory System.....	41.5	11.9	27.6	13.4	5.6	100.0
Diseases of the Digestive System.....	43.7	12.5	25.5	12.6	5.7	100.0
Diseases of the Genito-Urinary System.....	11.6	..	44.7	22.4	..	100.0
Deliveries and Complications of Pregnancy, Childbirth and the Puerperium.....	..	28.9	70.5	..	—	100.0
Diseases of the Skin and Cellular Tissue.....	42.9	13.0	27.1	17.0	..	100.0
Diseases of the Bones and Organs of Movement.....	15.8	..	36.6	32.5	15.1	100.0
Symptoms, Senility and Ill-defined Conditions.....	31.7	11.2	31.8	17.2	8.0	100.0
Injuries, Poisonings and Violence.....	35.0	13.8	28.5	16.3	6.3	100.0
All Classes.....	40.6	11.9	27.8	13.8	5.9	100.0

13.—Rates per 1,000 Population and Percentage Distribution of New Illnesses Reported, by Major Diagnostic Class and by Age Group, Survey Year 1950-51—concluded

Diagnostic Class	Under 15 Years	15-24 Years	25-44 Years	45-64 Years	65 Years or Over	All Ages
	PERCENTAGE DISTRIBUTION OF NEW ILLNESSES IN EACH AGE GROUP					
Infective and Parasitic Diseases.....	10.31	3.35	1.33	1.18		5.19
Neoplasms.....	..	..	..	..	..	0.24
Allergic, Endocrine, Metabolic and Nutritional Diseases.....	0.50	..	..	..	..	0.49
Diseases of the Blood and Blood-forming Organs.....	..	..	..	..	..	0.24
Diseases of the Nervous System and Sense Organs.....	3.87	2.59	2.53	3.25	4.37	3.29
Diseases of the Circulatory System.....	..	..	1.18	2.10	2.92	0.93
Diseases of the Respiratory System.....	60.03	58.94	58.27	56.94	55.24	58.70
Diseases of the Digestive System.....	7.98	7.80	6.78	6.75	7.10	7.40
Diseases of the Genito-Urinary System.....	0.41	..	2.31	2.33	..	1.44
Deliveries and Complications of Pregnancy, Childbirth and the Puerperium.....	..	3.51	3.67	..	—	1.45
Diseases of the Skin and Cellular Tissue.....	2.17	2.25	2.01	1.78		2.06
Diseases of the Bones and Organs of Movement.....	0.34	..	1.46	2.62	2.82	1.11
Symptoms, Senility and Ill-defined Conditions.....	9.01	10.86	13.20	14.39	15.63	11.53
Injuries, Poisonings and Violence.....	4.99	6.70	5.94	6.85	6.17	5.79
All Classes.....	100.00	100.00	100.00	100.00	100.00	100.00

Estimated Prevalence of Illness in Canada at the Commencement of the Survey Year.—Table 14 gives the estimated rates per 1,000 population and percentages of the prevalence of illness as experienced by the Canadian population at the commencement of the survey year. All those illnesses which were reported in progress on the day the survey began were recorded. The table gives separate rates per 1,000 population and percentages for ten diagnostic classes and a few diagnostic groups for which reliable estimates could be prepared.

14.—Estimated Illnesses Reported at Commencement of Survey Year 1950-51 per 1,000 Population, by Diagnostic Class

Int. List No.	Class of Illness and Diagnostic Group	Estimated Illnesses Reported at Commencement of Survey Year per 1,000 Population	P.C. of All Illnesses Reported at Commencement of Survey Year
001-138	Infective and Parasitic Diseases.....	3.9	4.01
240-289	Allergic, Endocrine, Metabolic and Nutritional Diseases.....	5.5	5.64
330-398	Diseases of the Nervous System and Sense Organs.....	6.2	6.37
400-468	Diseases of the Circulatory System.....	12.6	12.91
400-434	Diseases of heart, without hypertension, rheumatic fever.....	5.0	5.11
440-447	Hypertensive disease.....	3.3	3.40
470-527	Diseases of the Respiratory System.....	16.9	17.28
470	Acute nasopharyngitis (common cold).....	8.5	8.72
530-587	Diseases of the Digestive System.....	8.6	8.84
543-545	Disorders of functions of stomach and other diseases of stomach and duodenum.....	2.5	2.53
590-637	Diseases of the Genito-Urinary System.....	4.8	4.87
610-637	Diseases of genital organs.....	2.9	3.00
690-716	Diseases of the Skin and Cellular Tissue.....	4.6	4.72
720-749	Diseases of the Bones and Organs of Movement.....	10.3	10.57
720-725	Arthritis.....	4.2	4.28
727	Rheumatism, unspecified.....	3.6	3.73
780-795	Symptoms, Senility and Ill-defined Conditions.....	15.6	15.96
787	Symptoms referable to limbs and back.....	5.3	5.42
001-N999	All Illnesses.....	97.7	100.00

Subsection 3.—Notifiable Diseases

Notifiable diseases include essentially communicable diseases. The method of collecting notifiable disease statistics is outlined in the 1955 Year Book at pp. 246-247 and numbers of cases and rates for selected diseases for 1926 to 1955 are given in the 1956 edition at p. 267.

Table 15 shows the number of cases reported for selected notifiable diseases and the rates per 100,000 population for 1956. That year was free from major epidemics on a national scale and the number of cases of poliomyelitis dropped to a new low.

15.—Reported Cases of Selected Notifiable Diseases and Rates per 100,000 Population by Province 1956

Int. List No.	Disease	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	Canada ¹
NUMBERS OF CASES													
087	Chickenpox.....	255	100	1,679	2	9,582	16,432	1,249	59	2	7,113	30	36,499
055	Diphtheria.....	1	—	—	1	43	4	48	15	22	1	—	135
045-048	Dysentery ³	1	22	—	18	23	70	16	48	71	342	—	611
046	Amoebic.....	—	—	—	2	2	2	—	—	—	—	—	2
045	Bacillary.....	—	22	—	18	23	68	16	48	71	342	—	608
082	Encephalomyelitis, infectious.....	—	2	—	—	2	20	8	6	1	9	—	46
480-483	Influenza, epidemic.....	2	3,242	3,374	9	—	344	102	23	2	4,021	60	11,177
085	Measles.....	566	575	2,035	2	15,131	25,846	1,797	297	2,075	5,616	48	53,986
057	Meningococcal meningitis and meningococcemia....	73	4	10	31	26	74	7	12	2	45	1	285
089	Mumps.....	43	347	560	2	5,302	13,705	1,350	37	2	6,768	—	28,112
080	Poliomyelitis, epidemic ³	4	4	20	24	152	193	22	21	76	84	7	607
080.0	} Without paralysis.....	3	3	9	7	125	127	15	7	35	37	1	369
080.1	} With paralysis.....	1	1	11	17	22	66	7	7	41	47	6	226
080.2	} Without paralysis.....	153	2	929	2	22,305	16,043	170	13	982	11,297	136	52,028
086	Rubella (German measles).....	187	755	1,788	48	2,327	4,669	185	240	655	816	2	11,672
050, 051	Scarlet fever ⁴	—	—	—	—	—	—	—	—	—	—	—	—
084	Smallpox.....	385	44	112	579	3,512	1,334	647	355	1,071	1,331	7	9,377
001-002	Tuberculosis ⁵	384	31	102	642	3,398	5	617	275	982	1,207	7	7,545
003-019	Pulmonary.....	—	13	9	37	114	5	50	77	89	124	—	494
040, 041	Non-pulmonary.....	18	—	—	13	229	92	1	11	27	64	—	455
044	Typhoid and paratyphoid.....	—	—	—	92	33	9	1	2	4	—	—	141
020-039	Undulant fever.....	475	41	504	224	3,764	2,244	1,444	1,269	2,988	3,643	46	16,642
020-029	Veneral diseases.....	43	4	88	33	989	386	87	108	145	195	4	2,082
030-035	Syphilis.....	432	37	416	191	2,774	1,858	1,356	2,158	2,842	3,442	41	14,547
036-039	Gonorrhoea.....	—	—	—	—	—	—	—	—	—	—	—	13
036-039	Other venereal diseases ⁶	—	—	—	—	—	—	—	—	—	—	—	—
056	Whooping cough.....	154	537	174	142	3,944	1,265	402	368	540	987	—	8,513
RATES PER 100,000 POPULATION (CENSUS 1956)													
087	Chickenpox.....	61.4	100.7	241.7	2	207.0	304.0	146.9	6.7	2	508.6	245.9	253.8
055	Diphtheria.....	0.2	—	—	0.2	0.9	0.1	5.6	1.7	2.0	0.1	—	0.8
045-048	Dysentery ³	0.2	22.2	—	3.2	0.5	1.3	1.9	5.5	6.3	24.5	—	3.8
046	Amoebic.....	—	—	—	—	—	—	—	—	—	—	—	—
045	Bacillary.....	—	22.2	—	3.2	0.5	1.3	1.9	5.5	6.3	24.5	—	3.8
082	Encephalomyelitis, infectious.....	—	2	—	—	7	0.4	0.9	0.7	0.1	0.6	—	0.3
480-483	Influenza, epidemic.....	0.5	3,264.9	485.7	1.6	—	6.4	12.0	2.6	2	287.5	491.8	74.8
085	Measles.....	136.4	579.1	292.9	2	326.9	478.2	211.4	33.7	184.8	401.6	393.4	348.1
057	Meningococcal meningitis and meningococcemia....	17.6	4.0	1.4	5.6	0.6	1.4	0.8	1.4	0.2	3.2	8.2	1.8
089	Mumps.....	10.4	349.4	80.6	2	114.6	253.6	158.8	4.2	2	484.0	—	195.4
080	Poliomyelitis, epidemic ³	1.0	4.0	2.9	4.3	3.3	3.6	2.6	2.4	6.8	6.0	57.4	3.8
080.0	} Without paralysis.....	0.7	3.0	1.3	1.3	2.7	2.3	1.8	0.8	3.1	2.6	8.2	2.8
080.1	} With paralysis.....	—	—	—	—	—	—	—	—	—	—	—	—

For footnotes, see end of table, p. 269.

**15.—Reported Cases of Selected Notifiable Diseases and Rates per 100,000
Population by Province 1956—concluded**

Int. List No.	Disease	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yu- kon	Canada
RATES PER 100,000 POPULATION (CENSUS 1956)—concluded													
086	Rubella (German measles).....	36.9	²	133.7	²	481.9	296.8	20.0	1.5	87.4	807.8	1,114.8	337.7
050, 051	Scarlet fever ¹	45.0	760.3	257.4	8.7	50.3	86.4	21.8	27.3	58.3	58.3	16.4	72.7
084	Smallpox.....	—	²	—	—	—	—	—	—	—	—	—	—
001-019	Tuberculosis ³	92.7	44.3	16.1	104.4	75.9	24.7	76.1	40.3	95.4	95.2	57.4	58.4
001, 002	Pulmonary.....	92.5	31.2	14.7	97.7	73.4	⁵	72.6	31.2	87.4	86.5	57.4	70.8
003-019	Non-pulmonary.....	0.2	13.1	1.3	6.7	2.5	⁵	5.5	8.7	7.9	8.9	—	4.6
040, 041	Typhoid and paratyphoid.....	4.3	—	—	2.3	4.9	1.7	0.1	1.2	2.4	4.6	—	2.8
044	Undulant fever.....	—	—	—	—	2.0	0.6	1.1	0.1	0.2	0.3	—	0.9
020-039	Venereal diseases.....	114.4	41.3	72.5	40.4	81.3	41.5	169.9	144.1	266.0	260.5	377.0	103.6
020-029	Syphilis.....	10.4	4.0	12.7	6.0	21.4	7.1	10.2	12.3	12.9	13.9	32.8	13.0
030-035	Gonorrhoea.....	104.1	37.3	59.9	34.4	59.9	34.4	159.5	131.5	253.0	246.1	336.1	90.6
036-039	Other venereal diseases ⁶	—	—	—	—	7	—	0.1	0.3	0.1	0.4	8.2	0.1
056	Whooping cough.....	37.1	540.8	25.0	25.6	85.2	23.4	47.3	41.8	48.1	70.6	—	53.0

¹ Exclusive of the Northwest Territories.

includes cases where type was not specified.

² Disease not reportable in provinces indicated.

not specified.

⁴ Includes cases of septic sore throat (epidemic).

⁵ Type

⁶ Includes chancreoid, granuloma inguinale and lymphogranuloma venereum.

⁷ Less

than 0.05 per 100,000 population.

Subsection 4.—Visiting Nursing Services

Annual statistics on home nursing and health counselling services based on the experience of the Victorian Order of Nurses for Canada have been compiled and published by the Dominion Bureau of Statistics beginning with the year 1952. This survey does not provide a complete picture of such services in Canada because a number of other agencies, though smaller in size and coverage, are engaged in home nursing. The Victorian Order of Nurses, the only national organization of its kind, had 116 branches located in nine provinces in 1956. The Order provides visiting nursing services in the area of maternity care as well as care for medical and surgical cases. In addition, a number of community services such as classes for expectant mothers, industrial nursing, etc., are operated by the Order.

The services of the Order are always rendered under the direction of the patient's physician on a visit basis, and include bedside nursing, prenatal, postnatal and newborn care, and health instruction. The services are designed to meet the needs of patients who cannot or need not go to hospital, and patients who are awaiting admission to hospital, as well as those returning from hospital and still requiring nursing service such as dressings, treatments or other care. Part of the nurses' duties are the demonstration and supervision of nursing care to be carried out by members of the patient's family.

Since 1952 an increasing number of *visits* by the nurses was recorded each year; in 1956 over one million (1,041,782) visits were made, an increase of almost 16 p.c. over 1952. However, because of the trend toward the treatment of more and more chronic cases, the number of *cases* attended decreased between 1952 and 1954 and rose only slightly again in 1955 and 1956. The medical and surgical group, excluding normal maternity and other health instruction cases, was mainly responsible for the increase in visits during the five-year period. This group recorded an increase of 29.1 p.c. in visits but a decrease

of 10.8 p.c. in cases. This trend is characterized by the increasing proportion of older patients treated for medical and surgical conditions and thus shows the growing impact of an aging population on health services. The average age of patients of both sexes was 54.3 in 1952, 59.2 in 1953, 62.5 in 1954, 64.0 in 1955 and 65.1 in 1956. The average age of male patients increased from 45.2 to 65.0 during the period and of female patients from 57.2 to 65.2. The percentage of cases under 45 years of age decreased from 40.8 in 1952 to 29.9 in 1956, while the percentage of cases 45 years or over increased from 58.4 to 69.7. Corresponding percentage changes are observed in the recorded visits.

The average number of visits per medical and surgical case increased from 11.1 in 1952 to 16.1 in 1956, or by 45 p.c.; the average visits per maternity case decreased from 2.9 to 2.5 or by 14 p.c.

The increase in the number of post-hospital cases from 10,915 in 1952 to 15,396 in 1956 and the increase in the percentage of such cases to total cases from 20.5 to 32.4 is an indication of the greater use being made of home care as supplementing hospital services.

The causes accounting for the largest proportion of visits in 1956, with their average visits per case were as follows:—

<i>Cause</i>	<i>Visits</i>	<i>Percentage of Total Visits</i>	<i>Average Visits per Case</i>
	No.		No.
Diabetes.....	121,708	15.9	46.2
Diseases of the heart.....	115,259	15.0	21.2
Diseases of the central nervous system and sense organs.....	93,279	12.2	28.7
Anæmias and other diseases of the blood and blood-forming organs.....	77,910	10.2	22.3
Malignant neoplasms.....	56,357	7.4	17.5
Arthritis and rheumatism.....	39,454	5.2	28.5

In the field of maternity and newborn care, there were 34,140 normal maternity cases attended by Victorian Order nurses in 1956; of these 11,770 were attended at the prenatal and 22,370 at the postnatal stage. These figures do not include 1,925 maternity cases involving complications. Care and health supervision was provided to 29,994 newborn babies during that year. A total of 18,044 sessions were held for expectant mothers, which had an enrolment of about 7,000 persons.

PART II.—PUBLIC WELFARE AND SOCIAL SECURITY

Responsibility for social welfare in Canada is shared between the Federal Government, which is concerned largely with income security programs and the provision of services to special groups, and the provinces which delegate an important share of responsibility to the municipalities.

The creation of the Department of National Health and Welfare in 1944 established for the first time in the Federal Government a department in which public welfare is a major responsibility. The Department is charged with the administration of federal Acts relating to welfare which are not assigned by law to other departments. In addition to the general promotion of social welfare, the Welfare Branch of the Department administers

the family allowances program, the old age security program and the federal aspects of old age assistance, allowances for blind and disabled persons and of the new program of unemployment assistance. Grants to the provinces to promote physical fitness were introduced in 1943 but the Act providing for them was repealed in June 1954. The Department continues to provide physical fitness and recreation consultative services.

Unemployment insurance is administered by the Unemployment Insurance Commission; welfare and health services for veterans by the Department of Veterans Affairs; the welfare of Indians by the Department of Citizenship and Immigration and the welfare of Eskimos by the Department of Northern Affairs and National Resources.

Administration and financial responsibility in other fields of welfare such as mothers' allowances, child protection, services for older persons, community services and general assistance or relief are provided by the provinces and their local subdivisions.

Section 1.—Federal Government Programs

Subsection 1.—Family Allowances

The Family Allowances Act of 1944 is designed to assist in providing equal opportunity for all Canadian children. The allowances involve no 'means test' and are paid entirely from the Federal Consolidated Revenue Fund. They do not constitute taxable income but there is a smaller income tax exemption for children eligible for allowances.

Allowances are payable in respect of every child under the age of 16 years who was born in Canada, or who has been a resident of the country for one year, or whose father or mother was domiciled in Canada for three years immediately prior to the birth of the child. Payment is made each month, normally to the mother, although any person who substantially maintains the child may be paid the allowance on his behalf. Allowances are paid at the monthly rate of \$6 for each child under 10 years and \$8 for each child 10 or over but under 16 years. (Prior to September 1957 the rates were \$5 for each child under 6 years, \$6 for each child from 6 to 9 years, \$7 for each child from 10 to 12 years, and \$8 for each child 13 or over but under 16 years.) The allowances are paid by cheque, except for some Eskimo and Indian children in remote areas for whom payment is made largely in kind because of lack of exchange facilities and the desirability for education in the use of nutritive foods.

If the allowances are not spent for the purposes outlined in the Act payment may be discontinued or made to some other person or agency on behalf of the child. Allowances are not payable for any child who fails to comply with provincial school regulations or on behalf of a girl who is married and under 16 years of age.

The program is administered by the Family Allowances and Old Age Security Division of the Department of National Health and Welfare, through regional offices located in each provincial capital. A welfare section in each regional office deals with welfare questions arising from administration of the allowances. A Supervisor of Welfare Services advises each Regional Director and reports through him to the Chief Supervisor of Welfare Services, who acts in a similar advisory capacity to the National Director. The actual preparing and issuing of the cheques is the responsibility of the treasury division of each regional office which reports to the Chief Treasury Officer of the Department of Finance attached to the Department of National Health and Welfare. The Regional Director for the Yukon and Northwest Territories, located in Ottawa, is responsible for payments to families in those areas.

Through the Department of Citizenship and Immigration the Federal Government pays family assistance at the rate of \$5 per month for each child under 16 years of age supported by an immigrant who has landed for permanent residence in Canada, or by a Canadian returning to Canada to reside permanently. This allowance is paid quarterly and for a maximum period of one year.

1.—Family Allowances Statistics by Province, Years Ended Mar. 31, 1955-57

Province or Territory and Year	Families Receiving Allowance in March	Children for Whom Allowance Paid in March	Average Number of Children per Family in March	Average Allowance ¹		Net Total Allowances Paid during Fiscal Year
				Per Family	Per Child	
	No.	No.	No.	\$	\$	\$
Newfoundland.....1955	56,692	169,760	2.99	17.91	5.98	11,967,775
.....1956	58,223	175,474	3.01	18.07	5.99	12,414,789
.....1957	59,572	181,237	3.04	18.31	6.02	12,881,415
Prince Edward Island...1955	13,142	35,812	2.76	16.54	6.07	2,590,704
.....1956	13,151	36,144	2.75	16.67	6.07	2,621,722
.....1957	13,067	36,173	2.77	16.86	6.09	2,640,585
Nova Scotia.....1955	97,478	238,896	2.45	14.84	6.05	17,147,920
.....1956	99,071	244,551	2.47	14.97	6.07	17,596,684
.....1957	99,957	248,827	2.49	15.13	6.08	17,973,392
New Brunswick.....1955	76,229	210,640	2.76	16.68	6.03	15,073,324
.....1956	77,079	214,966	2.79	16.88	6.05	15,451,544
.....1957	77,833	218,703	2.81	17.05	6.07	15,779,360
Quebec.....1955	605,916	1,624,055	2.68	16.27	6.07	116,057,182
.....1956	623,961	1,675,840	2.68	16.36	6.09	120,389,838
.....1957	642,573	1,729,386	2.69	16.39	6.09	124,368,344
Ontario.....1955	744,736	1,574,703	2.11	12.68	6.00	110,492,480
.....1956	773,535	1,657,561	2.14	12.87	6.00	116,604,314
.....1957	800,279	1,734,813	2.17	13.05	6.02	122,539,123
Manitoba.....1955	119,594	264,274	2.21	13.26	6.00	18,705,349
.....1956	122,018	272,916	2.24	13.46	6.02	19,418,713
.....1957	122,386	276,912	2.26	13.65	6.03	19,888,717
Saskatchewan.....1955	126,424	290,359	2.30	13.92	6.06	20,894,790
.....1956	127,175	296,027	2.33	14.10	6.06	21,401,114
.....1957	126,271	298,085	2.36	14.31	6.06	21,644,971
Alberta.....1955	161,737	361,551	2.23	13.39	5.99	25,390,585
.....1956	167,705	380,095	2.27	13.57	5.99	26,752,793
.....1957	172,533	395,234	2.29	13.76	6.00	27,953,311
British Columbia.....1955	188,471	388,442	2.06	12.45	6.04	27,405,872
.....1956	196,955	412,819	2.10	12.67	6.04	29,097,077
.....1957	207,626	440,749	2.12	12.86	6.06	31,029,472
Yukon and Northwest Territories.....1955	4,608	10,550	2.29	13.69	5.98	739,984
.....1956	4,745	11,043	2.33	14.04	6.03	786,437
.....1957	4,794	11,317	2.36	14.00	5.93	819,150
Canada.....1955	2,195,027	5,169,042	2.35	14.20	6.03	366,465,965
.....1956	2,263,618	5,377,436	2.37	14.35	6.04	382,535,026
.....1957	2,326,891	5,571,436	2.39	14.49	6.05	397,517,840

¹ Based on gross payments for March.

Subsection 2.—Old Age Security

The Old Age Security Act of 1952 as amended November 1957, provides a universal pension of \$55 a month (\$40 prior to July 1, 1957, \$46 from July 1 to Oct. 31, 1957) payable by the Federal Government to all persons aged 70 or over, subject to a residence qualification. To qualify for pension a person must have resided in Canada for 10 years (previously 20 years) immediately preceding its commencement or, if absent during that period, he must have actually been present in Canada prior to it for double any period of absence and must have resided in Canada at least one year immediately preceding commencement of pension. The pension is suspended when a pensioner leaves Canada but on his return may be resumed and, if absence has not exceeded six months, may be paid retroactively for as many as six months of absence in any calendar year.

The pension is financed on a pay-as-you-go method through a 2-p.c. sales tax, a 2-p.c. tax on taxable corporation income and, subject to a limit of \$60 a year, a 2-p.c. tax on taxable personal income, which are paid into the Old Age Security Fund. The pension is paid from the Consolidated Revenue Fund and charged to the Old Age Security Fund. The program is administered by the Family Allowances and Old Age Security Division of the Department of National Health and Welfare, through the Family Allowances and Old Age Security regional offices located in each provincial capital.

Persons in receipt of old age assistance who reach age 70 are automatically transferred to old age security. Others make application to the regional office.

As at October 1957, Alberta, British Columbia and Saskatchewan made supplementary payments to recipients of old age security who qualified under a means and residence test. In British Columbia the allowance could not exceed \$20 per month, in Alberta \$15 per month, in Saskatchewan it was a minimum of \$2.50 per month rising to a maximum of \$10 per month per person. In Ontario, the provincial government shared, to the extent of 60 p.c., in the first \$20 per month of supplement paid by a municipality to a needy recipient of old age security. In some provinces and in the Yukon, recipients of the pension who were in special need might be eligible for relief.

2.—Operations of the Old Age Security Fund, Years Ended Mar. 31, 1954-57

Item	Year Ended Mar. 31—			
	1954	1955	1956	1957
	\$	\$	\$	\$
Revenue.....	338,970,791	353,205,333	366,218,474	379,111,374
Individual income tax.....	90,700,000	100,900,000	102,500,000	124,999,000
Corporation income tax.....	55,600,000	46,000,000	53,328,000	67,336,000
Sales tax.....	146,832,886	143,053,678	160,377,617	179,270,141
Grant from Consolidated Revenue Fund.....	—	—	—	6,000,000
Loan from Consolidated Revenue Fund.....	45,837,905 ¹	63,251,655 ¹	50,012,857 ¹	1,506,233
Expenditure (Benefit Payments).....	338,970,791	353,205,333	366,218,474	379,111,374

¹ Loans from Consolidated Revenue were written off by grants from the Consolidated Revenue Fund in following fiscal years.

3.—Old Age Security Statistics by Province, Years Ended Mar. 31, 1955-57

Province and Year	Pensioners in March	Pensions Paid during Fiscal Year (net)	Province or Territory and Year	Pensioners in March	Pensions Paid during Fiscal Year (net)
	No.	\$		No.	\$
Newfoundland.....1955	15,693	7,459,680	Manitoba.....1955	44,591	21,051,155
1956	15,973	7,599,405	1956	46,396	21,953,425
1957	16,248	7,738,205	1957	47,908	22,842,472
Prince Edward Island. 1955	6,786	3,261,800	Saskatchewan.....1955	44,821	21,202,779
1956	6,884	3,313,980	1956	47,101	22,331,244
1957	6,993	3,371,370	1957	48,984	23,334,799
Nova Scotia.....1955	37,801	18,149,526	Alberta.....1955	45,384	21,418,246
1956	38,212	18,411,345	1956	48,163	22,681,995
1957	38,860	18,706,153	1957	50,524	23,942,472
New Brunswick.....1955	27,014	12,945,905	British Columbia....1955	90,201	42,449,810
1956	27,513	13,246,139	1956	94,611	44,657,286
1957	28,170	13,528,005	1957	99,320	46,923,834
Quebec.....1955	158,109	74,724,977	Yukon and North-west Territories. 1955	540	245,360
1956	163,173	77,110,979	1956	556	268,440
1957	168,407	79,650,588	1957	579	280,680
Ontario.....1955	274,680	130,296,095	Canada.....1955	745,620	353,205,333
1956	283,171	134,644,236	1956	771,753	366,218,474
1957	291,493	138,792,796	1957	797,486	379,111,374

Subsection 3.—Government Annuities*

Under the Government Annuities Act (R.S.C. 1952, c. 132), passed in 1908, the Federal Government carries on a service to assist Canadians to make provision for old age. The Act is administered by the Minister of Labour.

A Canadian Government annuity is a fixed yearly income purchased from and paid by the Government of Canada. The annuity is payable in monthly instalments for life, or for life and guaranteed for a period of years. The minimum annuity is \$10 and the maximum \$1,200 a year or the actuarial equivalent if the annuity is to reduce by the amount of payments under the Old Age Security Act. Annuity contracts may be deferred or immediate. Deferred annuities are purchased by periodic or single premiums. Immediate annuity contracts provide immediate income. Annuities may now be arranged to reduce by \$55 per month at age 70 to fit in with payments under the Old Age Security Act.

The property and interest of the annuitant are neither transferable nor attachable. In the event of the death of the annuitant before a deferred annuity vests, all money paid is refunded with interest. Provision is made in the Act for group annuity contracts whereby employers may contract for the purchase of annuities on behalf of their employees, or associations on behalf of their members, the purchase money being derived partly from wages and partly from employer contributions or entirely from employer contributions. Group annuity plans now in effect cover a variety of industries and many municipal corporations throughout Canada. Annuities arising from individual contracts may be taxable in either of two ways: (1) if registered under Sect. 79B of the Income Tax Act for tax exemption on premiums, the annuity is fully taxable, or (2) if not registered the annuity is taxable on the interest portion only. Annuities arising from approved pension plans are fully taxable but the employee and the employer are entitled to tax exemption year by year on their annual contributions to the pension plan.

From Sept. 1, 1908, the date of the inception of the system, to Mar. 31, 1957, the total number of annuity contracts and certificates issued excluding replacements was 434,116. On the latter date 73,997 annuities were being paid amounting to \$37,272,532 annually and 306,338 deferred annuities were being purchased. The net total amount of purchase money received up to Mar. 31, 1957, was \$1,040,628,000.

* Revised in the Government Annuities Branch, Department of Labour, Ottawa.

Up to Mar. 31, 1957, 1,061 corporations, institutions and associations, as compared with 1,014 up to Mar. 31, 1956, had entered into agreements with the Government to purchase annuities. Under these arrangements 179,434 employees or members were holding certificates for purchase of deferred annuities as compared with 177,379 one year earlier. The number of certificates issued under groups in the year 1956-57 was 12,476 as compared with 15,672 for 1955-56.

4.—Individual Annuity Contracts and Certificates Issued and Net Receipts, Years Ended Mar. 31, 1954-57 with Totals for 1908-57

Year Ended Mar. 31—	Individual Contracts Issued	Group Certificates Issued	Total Contracts and Certificates Issued	Net Receipts
	No.	No.	No.	\$'000
1908-53 ¹	151,163	199,061	350,224	773,286
1954.....	5,305	13,161	18,466	64,380
1955.....	6,242	18,300	24,542	68,594
1956.....	6,799	15,672	22,471	69,945
1957.....	5,937	12,476	18,413	64,421
Totals, 1908-57.....	175,446	258,670	434,116	1,040,628

¹ Sept. 1, 1908 to Mar. 31, 1953.

5.—Government Annuities Fund Statements, Years Ended Mar. 31, 1953-57

Item	1953	1954	1955	1956	1957
	\$	\$	\$	\$	\$
Assets					
Fund at beginning of fiscal year.....	675,931,703	736,540,927	798,454,014	864,543,038	930,221,101
Receipts during the year, less payments.....	60,609,224	61,913,087	66,089,024	65,678,063	59,064,838
Fund at end of fiscal year.....	736,540,927	798,454,014	864,543,038	930,221,101	989,285,939
Liabilities					
Value of outstanding contracts.....	736,540,927	798,454,014	864,543,038	930,221,101	989,285,939
Receipts					
Immediate annuities.....	5,823,356	5,620,132	8,086,323	9,171,329	5,943,037
Deferred annuities.....	57,347,618	59,580,358	61,956,789	61,405,964	58,982,047
Interest on fund.....	26,994,535	29,306,356	31,638,652	34,064,769	36,322,665
Amount transferred to maintain reserve.....	743,616	98,911	371,521	—	—
Totals, Receipts.....	90,909,125	91,605,757	102,053,285	104,642,062	101,247,749
Payments					
Payments under vested annuity contracts....	27,693,728	29,749,159	31,943,115	34,498,070	36,963,652
Return of premiums with interest.....	2,222,482	2,123,349	2,572,284	3,033,205	3,252,738
Return of premiums without interest.....	383,691	820,162	1,448,862	1,317,682	1,177,408
Unclaimed annuities transferred to Consolidated Revenue Fund.....	—	—	—	—	29,398
Surplus transferred to Consolidated Revenue Fund.....	—	—	—	115,042	759,715
Totals, Payments.....	30,299,901	32,692,670	35,964,261	38,963,999	42,182,911

6.—Numbers and Values of Annuity Contracts as at Mar. 31, 1956 and 1957

Classification	1956			1957		
	Contracts	Amount of Annuities	Value at Mar. 31 of Contracts in Force	Contracts	Amount of Annuities	Value at Mar. 31 of Contracts in Force
	No.	\$	\$	No.	\$	\$
Vested ordinary.....	31,294	12,509,859	111,390,363	33,540	13,653,854	119,927,248
Vested guaranteed.....	33,483	18,296,068	203,011,985	32,854	18,263,884	201,939,906
Vested last survivor.....	4,290	2,133,472	27,739,918	4,203	2,114,078	27,279,201
Vested reducing at age 70.....	2,439	2,304,947	19,005,776	3,400	3,240,716	25,984,612
Deferred.....	301,014	¹	569,073,059	306,338	¹	614,154,972
Totals.....	372,520	35,244,346	930,221,101	380,335	37,272,532	989,285,939

¹ Undetermined.

Subsection 4.—Other Federal Government Programs

Unemployment Insurance and National Employment Service.—In 1940, by an amendment to the British North America Act, the Federal Government was given jurisdiction in the field of unemployment insurance and the Unemployment Insurance Act was passed, establishing a national system of unemployment insurance which is outlined in Chapter XVIII.

The National Employment Service is operated in conjunction with the unemployment insurance scheme. It is administered through local employment and claims offices and supervised by the Department of Labour. Statistics of positions offered and placements made are given in Chapter XVIII.

Prairie Farm Assistance.—The Prairie Farm Assistance Act is administered by the Department of Agriculture; a description of the legislation is given in Chapter IX.

Welfare Services for Indians and Eskimos.—The welfare of Indians and Eskimos is administered by the Department of Citizenship and Immigration and the Department of Northern Affairs and National Resources, respectively; this field is covered in the Population Chapter, pp. 146-150.

Section 2.—Federal-Provincial Programs

Subsection 1.—Old Age Assistance

The Old Age Assistance Act of 1952 as amended November 1957, provides for federal reimbursement to the provinces for assistance to persons aged 65 and over who are in need and who have resided in Canada for at least 10 years (previously, 20 years) or who, if absent from Canada during this period, have been present in Canada prior to the commencement of the 10-year period for double any period of absence. On reaching age 70 a pensioner is transferred to Old Age Security. The federal contribution may not exceed 50 p.c. of \$55 per month (\$40 prior to July 1, 1957, and \$46 from July 1 to Oct. 31, 1957) or of the assistance paid, whichever is less. The province administers the program and, within the limits of the federal Act, may fix the amount of assistance payable, the maximum income allowed and other conditions of eligibility.

For an unmarried person total income allowed, including assistance, may not exceed \$960 a year. For a married couple it may not exceed \$1,620 a year and, when the spouse is blind within the meaning of the Blind Persons Act, \$1,980 a year. Assistance is not paid to a person receiving an allowance under the Blind Persons or War Veterans Allowance Acts.

As at October 1957, Alberta, British Columbia and the Yukon made supplementary payments to recipients of old age assistance who qualified under a means and residence test. In British Columbia the allowance could not exceed \$20 per month, in Alberta, \$15 per month, and in the Yukon \$10 per month. In Ontario, the provincial government shared to the extent of 60 p.c. in the first \$20 per month of supplement paid by a municipality to a needy recipient of old age assistance. In some provinces and in the Yukon recipients of old age assistance who were in special need might be eligible for relief.

7.—Old Age Assistance Statistics by Province, Years Ended Mar. 31, 1955-57

Province or Territory and Year	Recipients in Month of March	Average Amount of Monthly Assistance	P.C. of Recipients to Population Age 65-69 ¹	Federal Government Contribution during Year
	No.	\$		\$
Newfoundland.....1955	5,073	29.38	54.55	898,973
.....1956	4,848	29.42	52.13	877,213
.....1957	4,893	38.08 ²	52.61	1,015,306
Prince Edward Island.....1955	612	27.54	18.00	98,531
.....1956	600	27.69	18.18	99,660
.....1957	580	28.04	17.58	98,143
Nova Scotia.....1955	5,178	33.63	26.55	1,063,165
.....1956	5,081	33.73	25.92	1,046,927
.....1957	4,950	33.95	25.26	1,020,529
New Brunswick.....1955	5,808	36.89	39.24	1,288,095
.....1956	5,891	36.86	39.54	1,303,189
.....1957	5,624	36.92	37.74	1,271,433
Quebec.....1955	32,882	37.48	32.46	7,392,923
.....1956	32,227	37.51	31.17	7,357,373
.....1957	31,031	37.47	30.01	7,107,138
Ontario.....1955	22,061	36.86	13.52	4,858,693
.....1956	21,731	36.90	13.19	4,918,978
.....1957	20,744	36.93	12.59	4,659,319
Manitoba.....1955	4,847	37.64	17.19	1,119,639
.....1956	4,652	37.84	16.50	1,111,604
.....1957	4,560	37.88	16.17	1,058,780
Saskatchewan.....1955	4,853	37.22	16.79	1,089,704
.....1956	4,925	37.05	17.22	1,150,402
.....1957	4,963	37.11	17.35	1,154,375
Alberta.....1955	5,341	36.67	17.74	1,165,332
.....1956	5,521	36.16	18.28	1,240,452
.....1957	5,400	36.14	17.88	1,211,188
British Columbia.....1955	7,868	37.76	15.25	1,872,909
.....1956	7,441	37.68	14.53	1,788,308
.....1957	7,029	37.67	13.73	1,665,347
Yukon Territory.....1955	12	38.41	6.45	2,220
.....1956	20	40.00	10.00	3,080
.....1957	31	40.00	15.50	6,640
Northwest Territories.....1955	90	38.11	52.33	18,942
.....1956	86	37.93	43.00	21,000
.....1957	102	37.96	51.00	22,597
Canada.....1955	94,625	36.56	21.01	20,869,126
.....1956	93,023	36.56	20.49	20,918,186
.....1957	89,907	37.03	19.81	20,290,795

¹ Estimated population as at June 1 of each year for the Provinces (1957 data related to 1956 population) and 1951 Census data for the Territories. ² During fiscal year maximum assistance raised from \$30 to \$40 per month.

Subsection 2.—Allowances for Blind Persons

The Blind Persons Act of 1952 as amended November 1957 provides for federal reimbursement to the provinces for allowances to blind persons aged 18 or over who are in need and who have resided in Canada for at least 10 years. The federal contribution may not exceed 75 p.c. of \$55 (\$40 prior to July 1, 1957; \$46 from July 1 to Oct. 31, 1957) per month or of the allowance paid, whichever is less. The province administers the program and, within the limits of the federal Act, may fix the amount of allowance payable and the maximum income allowed.

To qualify for an allowance a person must meet the required definition of blindness and have resided in Canada for 10 years immediately preceding its commencement or, if absent from Canada during this period, must have been present in Canada prior to its commencement for a period equal to double any period of absence.

For an unmarried person, total income, including the allowance, may not exceed \$1,200 a year; for a person with no spouse but with one or more dependent children, \$1,680; for a married couple, \$1,980. When the spouse is also blind, income of the couple may not exceed \$2,100. Allowances are not payable to a person receiving assistance under the Old Age Assistance Act, an allowance under the War Veterans Allowance Act, a pension under the Old Age Security Act or a pension for blindness under the Pensions Act.

As at October 1957, Alberta, British Columbia, Saskatchewan and the Yukon made supplementary payments to recipients of blindness allowances who qualified under income and/or residence tests. In British Columbia, a flat rate allowance of \$20 per month was payable, in Alberta the supplement could not exceed \$15 per month and in the Yukon \$10 per month. In Saskatchewan a minimum of \$2.50 per month is payable, rising to a maximum of \$10 per month per person. In Ontario the government shared to the extent of 60 p.c. in the first \$20 per month paid by a municipality to a needy recipient. In some provinces and in the Yukon, recipients in special need might also be eligible for relief.

8.—Statistics of Allowances for the Blind by Province, Years Ended Mar. 31, 1955-57

Province and Year	Recipients in Month of March	Average Amount of Monthly Allowance	P.C. of Recipients to Population Age 20-69 ¹	Federal Government Contribution during Year
		No. \$		\$
Newfoundland.....1955	338	39.70	0.174	119,970
1956	353	39.65	0.178	126,038
1957	370	39.47	0.186	132,559
Prince Edward Island.....1955	95	37.65	0.171	30,516
1956	96	37.52	0.181	32,279
1957	90	37.38	0.170	31,267
Nova Scotia.....1955	706	38.57	0.195	247,788
1956	726	39.55	0.198	254,604
1957	714	39.25	0.194	258,064
New Brunswick.....1955	706	39.49	0.251	256,748
1956	717	39.50	0.250	258,432
1957	719	39.53	0.251	258,340
Quebec.....1955	2,866	39.18	0.118	1,028,750
1956	2,905	39.44	0.118	1,036,243
1957	2,918	39.32	0.118	1,046,209
Ontario.....1955	1,731	38.73	0.057	607,709
1956	1,719	39.35	0.056	609,974
1957	1,713	39.09	0.056	613,014
Manitoba.....1955	405	39.13	0.084	145,014
1956	411	39.60	0.085	145,547
1957	402	39.60	0.083	147,725

¹For footnote, see end of table.

**8.—Statistics of Allowances for the Blind by Province, Years Ended Mar. 31, 1955-57—
concluded**

Province or Territory and Year	Recipients in Month of March	Average Amount of Monthly Allowance	P.C. of Recipients to Population Age 20-69 ¹	Federal Government Contribution during Year
	No.	\$		\$
Saskatchewan.....1955	374	38.58	0.076	132,670
.....1956	389	38.84	0.079	135,219
.....1957	399	38.80	0.081	141,797
Alberta.....1955	409	38.59	0.069	140,149
.....1956	415	38.54	0.070	145,707
.....1957	418	39.25	0.070	151,071
British Columbia.....1955	474	39.02	0.063	170,796
.....1956	475	39.52	0.062	166,772
.....1957	482	39.17	0.062	169,387
Yukon Territory.....1955	2	40.00	0.035	900
.....1956	6	40.00	0.105	1,350
.....1957	6	40.00	0.105	2,160
Northwest Territories.....1955	16	40.00	0.188	5,175
.....1956	18	40.00	0.212	6,330
.....1957	25	38.60	0.294	7,447
Canada.....1955	8,122	38.99	0.094	2,886,185
.....1956	8,230	39.36	0.093	2,918,495
.....1957	8,256	39.24	0.094	2,959,010

¹ Estimated population as at June 1 of each year for the Provinces (1957 data related to 1956 population) and 1951 Census data for the Territories.

Subsection 3.—Allowances for Disabled Persons

The Disabled Persons Act of 1955 as amended November 1957 provides for federal reimbursement to the provinces for allowances paid to permanently and totally disabled persons aged 18 or over who are in need and who have resided in Canada for at least 10 years. The federal contribution may not exceed 50 p.c. of \$55 per month (\$40 prior to July 1, 1957; \$46 between July 1 and Oct. 31, 1957) or of the allowance paid, whichever is the less. The province administers the program and, within the limits of the federal Act, may fix the amount of allowance payable, the maximum income allowed and other conditions of eligibility.

To qualify for an allowance a person must meet the definition of permanent and total disability set out in the Regulations to the Act and have resided in Canada for at least 10 years immediately preceding commencement of allowance or, if absent from Canada during this period, must have been present in Canada prior to its commencement for a period equal to double any period of absence.

For an unmarried person, total income including the allowance may not exceed \$960 a year. For a married couple the limit is \$1,620 a year except that if the spouse is blind within the meaning of the Blind Persons Act, income of the couple may not exceed \$1,980 a year. Allowances are not paid to a person receiving an allowance under the Blind Persons Act or the War Veterans Allowance Act, assistance under the Old Age Assistance Act, a pension under the Old Age Security Act, or mothers' allowances.

The definition of permanent and total disability employed under the Act requires that a person must be suffering from a major physiological, anatomical or psychological impairment, verified by objective medical findings. The impairment must be one that is likely to continue indefinitely without substantial improvement and that will severely limit activities of normal living.

The allowance is not payable to a patient in a mental institution or tuberculosis sanatorium. A recipient who is resident in a nursing home, an infirmary, a home for the aged, an institution for the care of incurables or a private, charitable or public institution is eligible for the allowance only if the major part of the cost of his accommodation is being paid by himself or his family. When a recipient is required to enter a public or private hospital the allowance may be paid for no more than two months of hospitalization in a calendar year, excluding months of admission and release. For the period that a recipient is in hospital for therapeutic treatment for his disability or rehabilitation, as approved by the provincial authority, the allowance may continue to be paid. The provincial authorities must suspend the payment of the allowance when in its opinion the recipient unreasonably neglects or refuses to comply with or to avail himself of training, rehabilitation or treatment facilities provided by or available in the province.

In the first two years of the program, over half of the persons granted an allowance had primary disabilities which were in two medical classes: (1) mental, psychoneurotic and personality disorders and (2) diseases of the nervous system and sense organs. The most frequently occurring primary disability was mental deficiency which was found in over 25 p.c. of all applicants granted an allowance.

As at October 1957, British Columbia made supplementary payments of \$20 per month to recipients of disability allowances who qualified under a residence test. In Ontario the government shared to the extent of 60 p.c. in the first \$20 per month paid by a municipality to a needy recipient. In some provinces and in the Yukon recipients in special need might also be eligible for relief.

9.—Statistics of Allowances for Disabled Persons by Province, Years Ended Mar. 31, 1955-57¹

Province and Year	Recipients in Month of March	Average Amount of Monthly Allowance	P.C. of Recipients to Population Age 20-69	Federal Government Contribution during Year
	No.	\$		\$
Newfoundland.....1955 ²	—	—	—	—
.....1956	606	39.08	0.305	119,326
.....1957	720	39.44	0.363	163,167
Prince Edward Island.....1955 ³	—	—	—	—
.....1956	292	32.84	0.552	56,703
.....1957	345	33.94	0.652	65,690
Nova Scotia.....1955	285	33.39	0.079	12,141
.....1956	1,172	34.86	0.319	254,326
.....1957	1,465	35.69	0.399	290,339
New Brunswick.....1955	177	39.46	0.063	8,183
.....1956	947	39.13	0.330	218,644
.....1957	1,262	39.43	0.440	281,859
Quebec.....1955 ³	—	—	—	—
.....1956	12,128	38.81	0.491	2,561,941
.....1957	15,856	38.97	0.642	3,593,395
Ontario.....1955	6,623	39.36	0.218	389,061
.....1956	7,501	39.24	0.244	1,712,426
.....1957	8,065	39.27	0.262	1,853,110
Manitoba.....1955	45	39.66	0.009	8,188
.....1956	738	39.00	0.153	172,350
.....1957	819	39.23	0.169	192,867
Saskatchewan.....1955	36	37.52	0.007	1,806
.....1956	788	38.20	0.160	162,884
.....1957	988	38.68	0.200	221,966

For footnotes, see end of table.

**9.—Statistics of Allowances for Disabled Persons by Province, Years Ended
Mar. 31, 1955-57—concluded**

Province or Territory and Year	Recipients in Month of March	Average Amount of Monthly Allowance	P.C. of Recipients to Population Age 20-69	Federal Government Contribution during Year
	No.	\$		\$
Alberta.....1955 ¹	—	—	—	—
1956	1,150	38.01	0.193	290,947
1957	1,245	38.17	0.209	276,593
British Columbia.....1955 ²	—	—	—	—
1956	705	9.00	0.091	115,521
1957	1,067	39.01	0.138	227,926
Northwest Territories.....1955	—	—	—	—
1956	—	—	—	—
1957	3	40.00	0.035	440
Canada⁴.....1955	7,166	39.12	0.083	419,379
1956	26,027	38.66	0.296	5,665,068
1957	31,835	38.84	0.361	7,167,352

¹ Program in effect for the last three months of 1954-55 fiscal year.

² Program became effective Apr. 1,

1955. ³ By Mar. 31, 1955, no payments had yet been made by the Federal Government to these provinces

in which the programs became effective Jan. 1, 1955. Payments for April 1955 include certain amounts retroactive to Jan. 1, 1955.

⁴ Excluding the Yukon Territory.

Subsection 4.—Unemployment Assistance

Under the Unemployment Assistance Act of 1956 the Federal Government may share with a province and its municipalities the cost of financial assistance to unemployed persons. No distinction is made in legislation between the employable and the unemployable. Federal aid is thus available to assist a province with a heavy relief load because of unemployment, or with a high proportion of unemployable persons in receipt of aid, or a combination of the two. A 1957 amendment deleted a provision under which federal reimbursement was made only in respect to recipients in excess of 0.45 p.c. of the provincial population.

Reimbursement is made to the province for payments within the existing provincial framework of general assistance. The scale and conditions of relief payments to recipients continue to be determined by the provinces and municipalities, except that the province agrees not to make length of residence a condition for the receipt of assistance when an applicant comes from another province which has signed a similar agreement.

The formula excludes federal reimbursement for payments for persons receiving mothers' allowances or persons who would normally be considered eligible for mothers' allowances. While it also generally excludes inmates of public and charitable institutions, it provides for federal sharing of provincial and municipal payments for those in certain types of homes for special care. Those receiving various types of social security payments under other programs are also excluded but the Federal Government shares with the provinces any additional relief payments other than cost-of-living bonus or across-the-board pension supplements made to such persons who are unemployed and in need. Health care and administration costs are also excluded from Federal Government reimbursement.

Agreements for the payment of federal assistance, effective from July 1, 1955, have been made with five provinces—Newfoundland, Prince Edward Island, Manitoba, Saskatchewan and British Columbia—and from Jan. 1, 1956, with a sixth province—New Brunswick. These agreements extend for five years except that with Saskatchewan, which runs for three years.

10.—Unemployment Assistance by Province, Years Ended Mar. 31, 1956 and 1957

Province and Year	Federal Share of Unemployment Assistance Costs	Recipients in March
	\$	No.
Newfoundland.....1956 ¹	1,174,735	38,641
.....1957	1,562,058	39,489
Prince Edward Island.....1956 ¹	55,033	1,596
.....1957	54,036	1,532
New Brunswick.....1956 ²	18,854	3,843
.....1957	32,887	3,797
Manitoba.....1956 ¹	484,131	10,649
.....1957 ²	650,000	11,000
Saskatchewan.....1956 ¹	369,519	10,464
.....1957	512,678	10,123
British Columbia.....1956 ¹	1,721,339	20,785
.....1957	2,299,894	21,289
Totals.....1956	3,823,611	85,978
.....1957²	5,111,553	87,230

¹ Agreement effective from July 1, 1955.² Agreement effective from Jan. 1, 1956.

Section 3.—Provincial Programs

Subsection 1.—Mothers' Allowances

All provinces have statutory provision for allowances to enable certain needy mothers to remain at home to care for their dependent children. The total cost of this assistance is paid from provincial funds except in Alberta where a portion of each allowance is charged to the municipality of residence. In Newfoundland the Mothers' Allowances program was incorporated in the Social Assistance Act 1954 which became effective Apr. 1, 1955, and the transference of all cases under the Mothers' Allowances Act was completed in March 1957.

Subject to the conditions of eligibility which vary from province to province, the allowances are payable to applicants who are widowed or whose husbands are mentally incapacitated and, except in Alberta, to those whose husbands are physically disabled and unable to support their families. They are also payable, except in Nova Scotia, to deserted wives who meet specified conditions; in several provinces to mothers who have been granted a divorce or legal separation; in some to unmarried mothers; and in Ontario to Indian mothers. Foster mothers are eligible under certain circumstances.

The age limit for children varies from 15 years in one province to 18 in another, with the limit being 17 in two provinces and 16 years in the remainder. Provision is made in most provinces to extend payment for a specified period if the child is attending school or if he is physically or mentally handicapped.

In all provinces applicants must satisfy conditions of need and residence but the amount of outside income and resources allowed and the length of residence required prior to application vary considerably, the latter, for example, from one year in Saskatchewan, Ontario, New Brunswick and Newfoundland to five years in Quebec. All provinces require that the applicant be resident at the time of application and generally that the child or children live with the recipient, and most provinces require that they continue to live in the province while in receipt of an allowance. In the six provinces in which British or Canadian nationality is a condition of eligibility, the applicant may qualify for mothers' allowances if the mother or father or child meet the specified provisions.

In each province the relevant Act is administered by public welfare authorities. Most provinces have a mothers' allowances board or commission which makes the final decision regarding eligibility and the amount of allowance granted, or acts in an advisory capacity. Rates of benefit as of June 1957 are given in Table 11 and the number of families and children assisted and amounts of benefits paid as at Mar. 31, 1955 and 1956, are given in Table 12.

Province	Mother and One Child	Each Additional Child	Disabled Father at Home	Family Maximum	Supplementary
Nfld.	\$25	\$5	\$10	No limit to the number who may benefit	Rent to \$20 in rural and \$30 in urban areas; fuel to half a ton of coal monthly or equivalent in oil or wood during winter; clothing to \$24 yearly for child 1-5 yrs., to \$36 for child 6-16 yrs., to \$60 for person 17 or older. Also, an allowance of not more than \$30 a month may be granted if considered necessary for the proper support of the family.
P.E.I.	\$25	\$5	None granted	\$50	None granted
N.S.	No set maximum, rates are based on average family income for community in which family lives		No special provision	\$80	None granted
N.B.	\$35	\$10	None granted	\$80	An additional \$10 for rent if circumstances require it but only if allowance paid is below maximum.
Que.	\$60	\$3	\$10	None set (minimum granted \$5)	A supplementary allowance of \$5 may be paid to a beneficiary incapable of working. Where need exists a special monthly allowance may be paid under the Quebec Public Charities Act through the municipality or a social agency. The cost is met in large part by the Province, with some contribution by the municipality concerned.
Ont.	\$50 for mother or father and one child \$24 for foster mother and one child	\$10 for foster mother and 2 children, with \$10 for each additional foster child	\$10	None set	\$20 where need is apparent. A fuel allowance of up to \$24 a month may be granted from Sept. 1 to Mar. 31.

For footnotes, see end of table, p. 284.

11.—Maximum Monthly Rates under Provincial Mothers' Allowances Legislation, June 1957—concluded

Province	Mother and One Child	Each Additional Child	Disabled Father at Home	Family Maximum	Supplementary
Man.....	\$51	\$10 for child 1-6 yrs. \$13 for child 7-11 yrs. \$15.50 for child 12-14 yrs. (subject to deductions for fourth and each additional child)	\$17.25	\$150 \$467.25 if disabled father at home	Up to \$50 where necessary, \$25 of which may be used for rent above the schedule maximum. Fuel allowance granted for seven months.
Sask.....	\$40 for mother and one child \$30 for guardian and one child	\$10 for 2nd \$5 for each subsequent child (with parent or guardian)	\$10 (also if confined to a nursing home or sanatorium)	\$90 \$100 if disabled father at home, in nursing home or sanatorium	Municipality may grant supplementary aid. Costs are shared between the Province and municipality on a 75-25 basis. In unorganized territories the Province assumes full cost.
Alta.....	\$60 \$70 may be granted when income or assistance does not exceed \$120 per year	\$30 for 2nd and 3rd child \$10 for 4th to 6th \$15 for 7th \$10 for 8th and 9th	None	\$165	Municipality may grant additional aid, 60 p.c. of the cost of which is reimbursed by the Province. In unorganized territories the Province assumes full cost.
B.C.....	\$42.50 plus \$24 from Social Allowance funds	\$7.50 plus \$8.50 from Social Allowance funds	\$7.50 plus \$8.50 from Social Allowance funds if not in receipt of old age security, old age assistance or disabled persons allowance	A maximum is set but there is no limit to the number who may benefit	Extra expenditures for additional needs such as repairs and emergencies; also for dietary extras, housekeeper services, prenatal allowances and certain assistance to T.B. patients and contacts are met through Social Allowance funds. Costs shared by Province and municipalities on 80-20 basis but Province meets total cost of provincial cases and of prenatal allowances.

¹ In Newfoundland the mothers' allowances program was incorporated in the Social Assistance Act, effective Apr. 1, 1955.
² Revised rates became effective Sept. 1, 1957, under the Mothers and Dependent Children's Allowances Act, 1957. Under this Act allowances are calculated on the basis of family needs and income.

12.—Mothers' Allowances by Province, as at Mar. 31, 1955 and 1956¹

Province and Year ¹	Families Assisted	Children Assisted	Benefits Paid ¹	Province and Year	Families Assisted	Children Assisted	Benefits Paid
	No.	No.	\$		No.	No.	\$
Newfoundland—				Ontario—			
1955.....	3,152	8,605	1,324,438	1955.....	7,294	16,496	6,545,452
1956 ²	386	1,001	718,259	1956.....	7,266	16,664	6,768,617
P. E. Island—				Manitoba—			
1955.....	237	611	73,250	1955.....	1,202	3,131	1,131,897
1956.....	285	734	78,613	1956.....	1,188	2,868	1,148,874
Nova Scotia—				Saskatchewan—			
1955.....	2,077	5,522	1,504,575	1955.....	2,397	6,359	1,252,019
1956.....	2,065	5,575	1,525,388	1956.....	2,521	6,662	1,507,975
New Brunswick—				Alberta—			
1955.....	2,087	6,051	1,301,900	1955.....	1,719	3,904	1,198,414
1956.....	2,022	5,825	1,250,075	1956.....	1,809	4,105	1,314,733
Quebec—				British Columbia—			
1955.....	20,024	58,070	7,956,309	1955.....	393	900	225,446 ² , ^r
1956.....	19,944	57,838	7,824,626	1956.....	323	742	184,688 ³

¹ Year ended Mar. 31.² Families receiving aid under the Mothers' Allowances Act, who were not yet transferred to Social Assistance (see p. 282).³ Not including \$175,997 and \$148,003 paid as supplementation from social allowance funds in 1955 and 1956 respectively.

Subsection 2.—Provincial Welfare Services

The care and protection of neglected and dependent children, care of the aged, social assistance or relief, and other special welfare services are governed by provincial legislation although in many areas responsibility for services rests with municipal or voluntary organizations. Though the programs and the methods of financing vary considerably, most provinces share the costs of some or all of the municipal services in organized areas and assume the total cost in unorganized territories. The medical services available to social assistance recipients are described at pp. 236-251, mothers' allowances are dealt with in the immediately preceding subsection, old age assistance at pp. 276-277, allowances for the blind at pp. 278-279 and allowances for totally and permanently disabled persons at pp. 279-281.

Newfoundland.—Provincial welfare services are administered by the Department of Public Welfare through a number of regional welfare centres.

Child Care and Protection.—Child welfare has developed largely as a public service and is administered by the Child Welfare Division. Neglected children, made wards of the Director, are placed in foster or adoptive homes or in institutions. The Department pays for the maintenance of wards, grants subsidies for children admitted to orphanages administered by religious organizations, and contributes towards the cost of educating blind and deaf-mute children in institutions outside the Province. The Division operates an Infants' Home providing short-term care.

The Division of Corrections, established in 1953, deals with juvenile delinquents and adult offenders and administers correctional institutions for boys and girls. A Youth Guidance Authority has been established.

Care of the Aged.—The Province maintains a Home for the Aged and Infirm at St. John's and also pays in whole or in part the cost of maintaining needy old people in the Salvation Army Home, in the Cowan Mission Association Home, in licensed boarding homes or in private homes. In 1955 a grant of 20 p.c. of costs, to be paid over a 10-year period, was made to the Roman Catholic Episcopal Corporation for the construction of a home and provision is made for grants to similar projects under other auspices.

Social Assistance.—Under the Social Assistance Act of 1954 which came into effect in April 1955, assistance is provided to needy persons previously aided under the Dependents' Allowances Act and the Mothers' Allowances Act. Aid for certain needy able-bodied persons is also provided. Federal payments to the Province made by agreement under the federal Unemployment Assistance Act 1956 (see p. 282) were made retroactive to July 1, 1955.

Prince Edward Island.—The Department of Welfare and Labour is responsible for the administration of provincial welfare services.

Child Care and Protection.—Under the Children's Protection Act, neglected or delinquent children are placed under the guardianship of the Director of Child Welfare. They are cared for in foster or adoptive homes, boarding homes or children's institutions. Provincial grants are made to child welfare agencies and to the two private orphanages, one Protestant and one Roman Catholic. Juvenile Courts are under the Attorney General's Department and juvenile delinquents are cared for at the expense of the Department of Welfare and Labour in correctional institutions of neighbouring provinces.

Care of the Aged.—The aged and infirm are cared for in Falconwood Mental Hospital and in two provincial infirmaries.

Social Assistance.—The Department provides direct social assistance in rural areas and assumes 50 p.c. of the cost of assistance granted by the City of Charlottetown and the incorporated towns and villages. The Department also operates a province-wide program of financial aid to families where the breadwinner is suffering from tuberculosis and is unable to support the family. Federal payments to the Province made by agreement under the federal Unemployment Assistance Act 1956 (see p. 282) were made retroactive to July 1, 1955.

Nova Scotia.—Provincial welfare services are administered by the Department of Public Welfare through a number of regional offices.

Child Care and Protection.—The child welfare program, including the inspection of institutions and the licensing of foster and maternity homes, is under the Director of Child Welfare. The Director supervises the 12 Children's Aid Societies to whom child care and protection is delegated and directly administers the program in the four areas in which societies are not organized. By court decision a neglected child may be made a ward of the Director or of a Children's Aid Society. Each Society receives annually a provincial grant of up to \$2,000, based on its performance and quality of service; a sum equal to 50 p.c. of funds received through private campaigns and from municipalities for general operating expenses; and an additional grant of not less than \$1,000, the maximum determined on a per capita basis. The cost of maintaining wards is shared by the Province and municipality of residence.

The Department operates the Nova Scotia Training School for mentally defective children and the Nova Scotia School for Boys for juvenile delinquents. It is also responsible for the operation of the nine Juvenile Courts and the supervision of their probation staffs. The municipality of residence is responsible for the maintenance of children in reformatories although the Province may contribute also if the reformatory complies with specified standards.

Care of the Aged.—The aged are cared for in municipal or county homes, in homes operated by religious or private organizations and in private boarding homes where the municipality of residence may contribute to the cost of maintenance. Homes for the aged are subject to provincial inspection but they do not receive direct financial assistance from the Province.

Social Assistance.—Relief to needy persons is a local responsibility under the Poor Relief Act except in the cities of Halifax and Sydney which provide welfare relief under their charters. The Province reimburses municipalities or welfare agencies which provide relief to transients lacking legal residence in the Province.

New Brunswick.—The Department of Health and Social Services administers provincial welfare legislation.

Child Care and Protection.—Under the Children's Protection Act, administered by the Minister of Health and Social Services, responsibility for protection and placement services is largely delegated to Children's Aid Societies. Guardianship of a neglected child may be vested in a Society, in the Director of Child Welfare or in the Court. Orphanages are operated by religious, private or municipal organizations. Boarding homes, with some exceptions, are licensed and are subject to the provincial inspection required for all child care institutions. The Province and the municipality of residence each contribute towards the maintenance of wards committed to an institution, and the Province reimburses municipalities for one-half of the cost of maintaining wards placed in foster homes, up to a prescribed maximum. The Province also makes grants to the Children's Aid Societies to assist in their general child welfare program. The Department may place blind or deaf-mute children in special schools outside the Province. Juvenile Courts are under the Attorney General's Department and delinquent boys may be placed in the Provincial Industrial School for Boys which reports to the Minister of Health and Social Services.

Care of the Aged.—Homes for the aged are operated under municipal, religious, fraternal or private auspices and are subject to provincial inspection but they receive no direct financial support from the Province.

Social Assistance.—Relief to needy persons is a local responsibility and is generally discharged through the provision of institutional or indoor relief to those in need. Outdoor relief is provided in a number of centres. Federal payments to the Province provided by agreement with the Department of Municipal Affairs under the federal Unemployment Assistance Act, 1956 (see p. 282) were made retroactive to Jan. 1, 1956.

Quebec.—Provincial welfare measures are administered by the Department of Social Welfare and Youth. Legislation passed in 1956 provided for the transfer to that Department from the Department of Health of responsibilities under the Public Charities Act for orphanages, nurseries, adoption and welfare institutions and the placement of abandoned children. The Public Charities Act embodies the Government's policy of granting subsidies to religious and private institutions rather than creating public services. Grants representing a major share of the costs of the services are made by the Province, with the municipalities and the institutions also contributing.

Child Care and Protection.—Needy or abandoned children are generally cared for in institutions such as orphanages and nurseries although there is an increasing use of foster homes by child welfare agencies. Children who are found by a Social Welfare Court or other court to be particularly exposed to moral or physical dangers may be admitted to recognized youth protection schools administered by the Department of Social Welfare and Youth. Municipalities of residence, depending on their size, contribute from 15 to 25 p.c. of the operating and maintenance costs of these schools and the Province the remainder and the entire cost of new construction. The Social Welfare Courts which are under the jurisdiction of the Department of the Attorney General, have statutory responsibility in connection with child and youth protection and certain other provincial programs and also serve as Family Courts. Children who have been exposed to tuberculosis but who have not been infected are placed with rural families under the supervision of the Department of Health in co-operation with child welfare agencies.

Care of the Aged.—Institutional care for indigent old people is provided under the Quebec Public Charities Act through private institutions. Under the same Act, family welfare agencies administer home allowances to needy old people who do not require institutional care. Standards in homes are governed by regulations under the provincial Public Health Act.

Social Assistance.—Assistance is given under the Public Charities Act, usually in the form of institutional care. The Department of Colonization operates a program whereby families in need are settled on the land in newly opened districts and granted financial aid until they become self-supporting. In these areas a disability pension scheme is linked to a program of free medical services.

Ontario.—Provincial welfare services are administered by the Department of Public Welfare. The Province is divided into 17 welfare districts each in charge of a supervisor.

Child Care and Protection.—Responsibility for the local administration of the Child Welfare Act is delegated by the Province to Children's Aid Societies under the supervision of the Director of Child Welfare. Maintenance costs of children made wards of a society or taken into care as non-wards on agreement with a municipality are paid by the municipality of residence with a 40 p.c. reimbursement by the Province. The Province also makes annual grants to the societies for their work other than the care and maintenance of children. Children's institutions are governed by provisions of the Charitable Institutions Act and day nurseries by the Day Nurseries Act. In 1957 the Children's Boarding Homes Act was passed requiring the registration of all premises not covered by other legislation in which five or more children not related to one another are lodged, boarded or cared for. The Act provides for inspection and for the establishment of standards in the operation of the homes. The Province makes per diem grants for children in charitable institutions and pays one-half of the operating and maintenance costs of municipal day nurseries. Juvenile Courts are under the Attorney General's Department while training schools for juvenile offenders are operated by the Department of Reform Institutions.

Care of the Aged.—Under the Homes for the Aged Act municipalities must provide institutional or boarding home care for the aged. The Province contributes 50 p.c. of the cost of constructing approved homes or of approved additions and extensions and 50 p.c. of their net operating and maintenance costs. It also pays up to 50 p.c. of the cost of maintenance in approved boarding homes. Private homes for the aged are licensed, inspected and assisted under the Charitable Institutions Act which provides grants-in-aid of construction equalling 50 p.c. of the costs up to \$2,500 per bed and a monthly maintenance payment of \$8 per resident. The Elderly Persons Housing Aid Act provides for grants to limited-dividend housing corporations building low-rental housing for elderly persons.

Social Assistance.—Under the Unemployment Relief Act the Province reimburses municipalities, up to a prescribed maximum, for 60 p.c. of their expenditures on relief to needy unemployables and on incapacitation allowances and rehabilitative measures for single, needy, handicapped residents. In unorganized areas the program is administered and financed by the Department. The Solders' Aid Commission extends emergency assistance and advice to ex-servicemen and their families.

Manitoba.—The Public Welfare Division of the Department of Health and Public Welfare is responsible for provincial welfare services.

Child Care and Protection.—The Director of Public Welfare administers provincial child welfare legislation, including the supervision of Children's Aid Societies and of child care institutions. The Public Welfare Division administers child welfare services in a large area of the Province, through decentralized district offices. In the remainder of the Province the Director supervises the four non-denominational Children's Aid Societies

in their respective areas. Neglected children may be made wards of the Director of Public Welfare or of a Children's Aid Society. Municipalities are responsible for the maintenance of wards with provincial reimbursement on the basis outlined below under Social Assistance. Payment of annual provincial grants to Children's Aid Societies is conditional on the provision of a basic level of service and the collection of substantial voluntary contributions.

The Division provides foster home care and supervision for mental defectives placed in the custody of the Director of Public Welfare and, with the Division of Psychiatry, operates a home for mentally defective girls. The Attorney General's Department is responsible for Juvenile Courts and operates a boys' home and a girls' home for delinquents.

Care of the Aged.—Institutions and nursing homes for the aged and infirm are supervised and licensed by the Department under public health legislation. Under the Elderly Persons Housing Act, the Province makes construction grants to municipalities, charitable organizations or limited dividend companies equalling 20 p.c. of costs for housing accommodation and one-third of the costs of building and renovating homes for the aged.

Social Assistance.—Municipalities are responsible for social assistance, which is defined as relief to indigents, together with maintenance costs of children under the Child Welfare Act. The Province reimburses a municipality to the extent of at least 40 p.c. of its social assistance costs; where it is to the municipality's advantage, provincial reimbursement is on the basis of 80 p.c. of the excess of the municipality's social assistance costs over the revenue the municipality receives from a tax levy of one mill on its equalized assessment. The Province is responsible for aid to persons without municipal residence as well as for general assistance in unorganized territory. Federal payments to the Province, made by agreement under the federal Unemployment Assistance Act 1956 (see p. 282), were made retroactive to July 1, 1955.

Saskatchewan.—Provincial welfare services are administered by the Department of Social Welfare and Rehabilitation.

Child Care and Protection.—The Department provides welfare services for children throughout the Province with the exception of Saskatoon where certain responsibilities are delegated to the Children's Aid Society. Children found to be neglected are, by court order, made wards of the Minister and are placed in foster homes, adoptive homes or institutions. A portion of the maintenance costs of wards, except of children born out of wedlock, for whom the Province assumes the entire cost, is paid by the municipality of residence. The Branch operates two institutions for the temporary care of wards and also a program of non-ward care.

The Corrections Branch of the Department is responsible for both adult and juvenile correctional services, supervises probation and parole services for juvenile delinquents and administers the Saskatchewan Boys' School and the provincial gaols. The Juvenile Court is presided over by a judge who devotes his time exclusively to cases of juvenile delinquency. Juveniles are discharged from correctional institutions only by parole. A Youth Guidance Authority supervises the discharging of juveniles from probation, from institutions and from parole.

Care of the Aged.—Aged and infirm persons are cared for in four provincial nursing homes and in private homes for the aged. The latter are inspected and licensed under the Housing Act which also empowers the Province and municipalities to subscribe to the stock of limited-dividend housing companies building low-rental accommodation for older persons. The Province may also make loans to the municipalities to assist them in subscribing. Capital grants amounting to 20 p.c. of construction costs and also maintenance grants equalling \$40 per bed per year, may be made to municipalities, church or charitable organizations sponsoring approved homes or housing projects.

Social Assistance and Special Services.—The costs of assistance to needy persons with municipal residence are divided on a 75-25 basis between the Province and the municipalities and the Province pays the entire cost for transients and for persons in unorganized areas. Federal payments to the Province made by agreement under the federal Unemployment Assistance Act 1956 (see p. 282) were made retroactive to July 1, 1955.

The Rehabilitation Branch provides training and placement services for the handicapped; one-half the cost of this training is borne by the Province and one-half by the municipality of residence. It is also responsible for the rehabilitation of minority groups and operates a farm where the métis—persons of mixed Indian and white stock who do not qualify under the Indian Act—are instructed in modern methods of farming while being paid for their work. Three schools are conducted for métis children.

The Department administers the Provincial Housing Act which empowers the Province to enter into public housing projects under the National Housing Act, and to stimulate construction of low-rental housing projects by limited-dividend housing corporations.

Alberta.—The Department of Public Welfare is responsible for the administration of provincial welfare measures. It has branches at the four larger centres and inspectors are located in suitable areas throughout the Province.

Child Care and Protection.—The Provincial child welfare program is directed by a Child Welfare Commission. Neglected children, made wards of the Government by court order or by agreement, may be placed in foster homes, adoptive homes or institutions. The cost of maintenance of wards is paid by the Province which recovers 40 p.c. of such cost from the municipality of residence. The Home Investigating Committee is responsible for the inspection and the licensing, where required, of all homes and institutions in which children are given care. The Attorney General's Department administers legislation regarding juvenile delinquency.

Care of the Aged.—Provincial grants equalling one-third of the cost or \$750 a bed, whichever is less, may be made to municipalities erecting or purchasing homes with ten or more beds for aged or infirm persons. The Province also meets up to 60 p.c. of the cost incurred by municipalities for the maintenance of indigent aged and infirm persons in homes licensed by the municipality in accordance with specified standards.

Social Assistance.—Municipalities are responsible for assistance to indigent residents but the Province reimburses the municipalities for up to 60 p.c. of the value of the assistance and pays the total cost of assistance to transients. The Province administers relief to residents of unorganized districts subject to a refund of 40 p.c. of the assistance from the districts. Families may be assisted through settlement on suitable farm lands. The Single Men's Branch maintains two hostels and one welfare centre to care for unemployable single homeless men without municipal domicile. The Province has also established a number of métis colonies where settlers have extensive fishing, hunting and trapping rights and are encouraged to engage in lumbering, agriculture and stock-raising. Educational services are provided and government operated stores sell goods at cost price.

Widows Pensions.—Under the Widows Pension Act, widows aged 60 to 64 years inclusive may receive pensions of up to \$46 per month. Also included in this category are wives of husbands committed to mental hospitals or deserted wives who meet the conditions of need and residence and are within the designated age group.

British Columbia.—Administration of provincial services by the Social Welfare Branch of the Department of Health and Welfare is decentralized through district and municipal offices in six regions covering the whole Province. Generalized field service is provided by provincial social workers. The staff of the Social Welfare Branch is also responsible for welfare services required in connection with a number of programs operated by the Health Branch.

Cities and municipalities of over 10,000 population must have their own social welfare departments to administer the social assistance program and to provide case-work services. The Province pays 50 p.c. of the salaries of municipal social workers or, where more than

one is needed, matches the municipal appointees, worker for worker. Smaller municipalities may have their own or amalgamated social welfare departments or they may pay for the services of the Social Welfare Branch.

Child Care and Protection.—The Child Welfare Division administers legislation governing the protection of children, including adoptions, and provides direct services except at Vancouver and Victoria where it supervises the Children's Aid Societies. Municipalities are responsible for the costs of maintaining wards but the Province reimburses them to the extent of 80 p.c. of such expenditure and pays the entire cost for children in unorganized areas. The Province pays the total maintenance cost of wards who are children of unmarried mothers. Child care institutions, boarding homes and day nurseries are licensed and supervised. The Social Welfare Branch administers an industrial school for delinquent boys and one for delinquent girls. Family case-work and rehabilitative supervision of children released from the schools are carried on in co-operation with the Psychiatric Division and the probation service of the Juvenile Courts. These courts are under the jurisdiction of the Attorney General's Department.

Care of the Aged.—The Province operates the Provincial Home for elderly, homeless men, the Provincial Infirmary for the chronically ill and the Provincial Homes for the Aged for senile and psychotic patients. It also licenses and supervises homes for the aged, nursing homes, and boarding homes, and where necessary shares with the municipalities on an 80-20 basis the costs of maintaining needy residents. The Province meets the total cost for provincial charges. Under the Elderly Citizens Housing Aid Act the Province makes grants amounting to one-third of construction costs to municipalities and non-profit corporations, including religious and service organizations, building homes or low-rental housing units for elderly citizens.

Social Assistance.—The social assistance program is administered by the Director of Welfare and supervised by the Family Division. It includes allowances to indigent individuals or families, counselling services, occupational training and the maintenance costs of nursing home or boarding home care. The Province reimburses the municipalities for 80 p.c. of the cost of basic and certain supplementary social assistance payments to indigent municipal residents and assumes the total cost of assistance granted for those without municipal residence. Federal payments to the Province made by agreement under the federal Unemployment Assistance Act 1956 (p. 282) were made retroactive to July 1, 1955.

Subsection 3.—Workmen's Compensation

In all ten provinces, legislation is in force providing for compensation for injury to a workman by accident arising out of and in the course of employment or by a specified industrial disease. A summary of provincial workmen's compensation legislation is given in Chapter XVIII.

Subsection 4.—Charitable and Benevolent Institutions

Statistics of charitable and benevolent institutions were secured by the Census of 1951 and covered the 1950 activities of 533 institutions, 490 being residential institutions and 43 being day nurseries. Summary statistics are given in the 1954 Year Book, p. 263.

PART III.—NATIONAL VOLUNTARY HEALTH AND WELFARE ACTIVITIES

A number of national voluntary agencies carry on important work in the provision of health and welfare services, planning and education. These agencies, some of which are described below, supplement the services of the federal and provincial authorities in many fields and play a leading role in stimulating public awareness of health and welfare needs and in promoting action to meet them.

The Canadian Welfare Council.—The Council, established in 1920, is a national voluntary association of organizations and individual citizens whose aim is to further the development of social services in Canada. Member organizations include community funds and councils, other private social agencies, various federal, provincial and municipal departments, and citizen groups and individuals active in the fields of health, welfare and recreation. It furnishes authoritative information, technical consultation and field service in the main areas of social welfare and provides a means of co-operative planning and action by public and private agencies.

The policies and programs of the Council are determined by its members under the leadership of a nationally representative board of governors. Aided by professional staff, the members work together through Divisions of Family and Child Welfare, Recreation, Public Welfare, Corrections, and Community Chests and Councils, and through special committees on such subjects as welfare of immigrants and the aging. Departments of the Council include the Information Branch and French Speaking Services.

Matters which have been under study by the Council include public assistance, health insurance, adoption, probation services, problems of the Hungarian refugees, homemaker services, recreation facilities, and united appeals. The Council undertakes surveys, on request, for agencies, communities and provinces. Council publications include the periodicals *Canadian Welfare* and *Bien-Être Social Canadien*, a directory of Canadian welfare services, pamphlets, and division bulletins.

The Canadian Red Cross Society.—Established in 1896 in Canada, the Society is affiliated with the International Red Cross and has branches in all ten provinces with a national headquarters in Toronto. Its objectives, defined in its Charter, are "... in time of peace or war to carry on and assist in work for the improvement of health, the prevention of disease and the mitigation of suffering throughout the world". Its activities cover a very broad area, ranging from national and international disaster relief services, to the support of local projects such as the establishment and operation of local clinics, the provision of medical services to indigent children and the promotion of water safety campaigns. One of its major activities in Canada has been the operation of blood banks in seven provinces and in parts of two others; it also maintains outpost hospitals, nursing stations and emergency units in eight provinces, and the Alberta Red Cross Crippled Children's Hospital in Calgary. The Junior Red Cross promotes health education through its schoolroom branches across Canada, supports a special fund to supply treatment to indigent handicapped children in Canada and a fund to promote international understanding.

The Health League of Canada.—The Health League of Canada, first established in 1918 as a National Committee for Combating Venereal Disease, has broadened its scope until its membership covers sixty national associations supporting a wide variety of health activities. The primary objectives of the League are the promotion of personal and community health and the prevention of disease through health education. Its major activities are administered from a national office in Toronto, usually working through the affiliated organizations. Educational efforts include the provision of speakers for meetings and the preparation of radio scripts, health education films and literature; a magazine is published bi-monthly and weekly news bulletins are released to the press. The League also sponsors a National Health Week and a National Immunization Week.

Victorian Order of Nurses.—Since its inception in 1897, the Victorian Order of Nurses has provided a professional home nursing service, details of which are given on pp. 269-270.

St. John Ambulance Association.—The Priory of Canada of the Most Venerable Order of the Hospital of St. John of Jerusalem, popularly known as the St. John Ambulance Association, began from a local unit in Montreal in 1884. The Association is composed

of two parts, the St. John Ambulance Association and the St. John Ambulance Brigade, the latter being a group of volunteer field workers. Headquarters of the Association is in Ottawa, with provincial divisions in all provinces controlling their own programs and financing the operation of their local branches; the St. John Ambulance Brigade is under the supervision of the national headquarters. The chief work of the Brigade is first aid and emergency nursing.

The Canadian National Institute for the Blind.—Since its inception in 1918 the Canadian National Institute for the Blind has been dedicated to the provision of rehabilitation and social welfare services to the blind and to those with partial sight. The national office, located in Toronto, serves all provinces through its six regional divisions and 46 branches. The Institute provides both social services and financial assistance; it arranges for examinations and eye treatment services, purchases glasses for needy individuals and operates an eye bank. Under an extensive rehabilitation program, with training facilities centred in Toronto, it trains blind persons in various occupations, offers job counselling and placement services and, for those who cannot compete in industry, it provides sheltered workshops; its more than 8,000 newspaper, tobacco and confectionery concession stands are operated by blind persons. Sightless field workers bring a home training program to blind persons to help them learn Braille, typing and handicrafts, and a special program for pre-school blind children prepares them for attendance at a school for the blind. The Institute builds and maintains residential quarters and recreational facilities in all larger centres and supplies Braille books and recordings to the blind from its national library in Toronto.

The Canadian Hearing Society.—Organized in Toronto in 1940 as the National Society of the Deaf and the Hard of Hearing, the Society operates chiefly in Toronto and the surrounding area. It is concerned with the preservation of hearing, the treatment of deafness and the provision of rehabilitation services for those with impaired hearing. It provides otological examinations, counselling, vocational guidance and job placement services for the deaf or hard of hearing, and hearing aids to indigent persons.

The Canadian Mental Health Association.—The Association, organized in 1918 as the National Committee for Mental Hygiene, now has divisions in all provinces except Prince Edward Island and Newfoundland; its national office is located in Toronto. Since its inception the organization has participated directly or indirectly in almost every development in the mental health field in Canada. The Association conducts an active public education program, serves as consultant to government departments, welfare agencies and voluntary organizations, operates a teacher training program and encourages research. It is supported by voluntary donations and federal and provincial grants.

The National Cancer Institute of Canada.—The National Cancer Institute, composed of persons representing various societies and agencies concerned with cancer research and therapy, was founded in 1947 to develop a nationally co-ordinated research and professional education program. The Institute promotes fundamental research through selected projects in universities, hospitals and research centres, maintains a Canadian Tumour Registry, provides training fellowships and, in co-operation with the Canadian Medical Association and medical schools, promotes professional education on cancer topics. The Institute receives support from federal and provincial grants and an annual contribution from the Canadian Cancer Society; a special project on lung cancer has been supported by the Canadian Tobacco Industry.

The Canadian Cancer Society.—Organized in 1938 to co-ordinate voluntary activities and disseminate knowledge in the cancer field, the Canadian Cancer Society operates in all provinces and has its national office in Toronto. Its services include a

public education program, welfare services such as transportation, home nursing and cancer dressings to needy persons, and fellowships to medical graduates for advanced study in cancer. The Society also makes an annual grant to the National Cancer Institute of Canada and supports clinical research.

The Canadian Arthritis and Rheumatism Society.—Established in 1948 to promote research, professional education and treatment services in the field of rheumatism and arthritis and to disseminate factual information, the Society has branches operating in all provinces except Prince Edward Island and Newfoundland; its national office is in Toronto. Medical advisory boards in each of the eight provinces and one at the national level give advice and guidance to the provincial and national directors. The Society sponsors an educational program both for the general public and for physicians; it encourages the establishment of stationary clinics in general hospitals for the treatment of low-income patients; it pioneered in the operation of mobile clinics and now operates some seventy units to bring treatment to home-bound patients; in two provinces it supports a mobile consultative service as well as research projects in various universities and institutions; and provides clinical fellowships to physicians in all parts of Canada.

The Canadian Council for Crippled Children and Adults.—The Council was established in 1937 to co-ordinate and support activities for the care and rehabilitation of physically impaired children. The first provincial organization was formed in Ontario in 1922 and similar organizations, which have remained autonomous, now exist in all provinces except Prince Edward Island. In 1954 the services of the organization were extended to include adults. Programs in the provinces vary, ranging from the establishment of cerebral palsy clinics and the operation of summer camps for the handicapped, to payment for treatment services, prosthetics, and hospital and nursing care for needy handicapped persons. In most provinces, service clubs raise funds to support the work of the organization, particularly through the sale of Easter Seals.

The Canadian Paraplegic Association.—The Canadian Paraplegic Association, which was established in 1945 to complement the specialized treatment and rehabilitation services developed for veterans by the Department of Veterans Affairs, now includes services for civilian paraplegic cases and persons seriously handicapped by poliomyelitis and other disabling conditions. The national office of the Association and the major treatment centre, Lyndhurst Lodge, are housed in the same building in Toronto. Services include in-patient and out-patient therapy, the provision of prosthetic appliances, loans to patients, and rehabilitation services such as job counselling. Four regional divisions also have been established—the Maritime, Quebec, Central Western and Western Divisions. The Western Division is affiliated with the G. F. Strong Rehabilitation Centre.

National Heart Foundation of Canada.—The Canadian Heart Foundation, formed in 1947 by physicians to co-ordinate research and disseminate information, was replaced by the National Heart Foundation of Canada in 1956. Its membership consists of lay and medical organizations interested in promoting or assisting research on cardiovascular diseases. Its national office is in Toronto.

Multiple Sclerosis Society of Canada.—Organized in 1948 to encourage, support and co-ordinate research regarding multiple sclerosis, the Society also compiles statistics and carries on public education. The national office in Ottawa is maintained by twelve provincial and local chapters whose chief function is fund raising.

The Muscular Dystrophy Association of Canada.—This Association was organized in 1954 to stimulate and unify efforts in research into the cause, nature and cure of muscular dystrophy and to promote the establishment of facilities for diagnostic, consultative and treatment services. It has a national office in Toronto supported by nine regional chapters and its chief activity is the support of research projects in medical centres across the country.

PART IV.—VETERANS SERVICES*

The Department of Veterans Affairs administers the legislation making up the Veterans Charter, except for the Pension Act which is the responsibility of the Canadian Pension Commission. The work of the Department now consists, in the main, of: the provision of medical treatment to veterans eligible to receive it; the rehabilitation of veterans including allowances, other financial assistance, education of veterans and educational assistance for children of war dead, and general welfare services; land settlement and home construction assistance; and veterans insurance. These functions are dealt with in Sections 1 to 5 of this Chapter. Pensions payable under the Pension Act are covered in Section 6, the payment of allowances under the War Veterans Allowance Act will be found in Section 7 and Veterans Commissions and Boards are in Section 8.

The work of the Department, except as regards the Veterans' Land Act, is carried out through 17 district and five sub-district offices located across Canada and one district office in London, England. The Veterans' Land Act is administered through eight district and 32 regional offices.

Section 1.—Medical, Dental and Prosthetic Services

Medical Services.—The Department of Veterans Affairs provides medical services to entitled veterans across Canada. A chain of 11 active-treatment hospitals is maintained together with two convalescent centres and two homes for provision of domiciliary care. These institutions had a total operating capacity of 9,285 beds at Mar. 31, 1957. Special centres exist in active-treatment hospitals for the investigation and treatment of arthritis, paraplegia, tuberculosis, mental and other conditions. An additional 588 beds are available in veterans' pavilions at Ottawa, Regina and Edmonton. These pavilions are owned by the Department but are operated by the parent hospitals and partially administered by the Department. Where Departmental facilities are not available, entitled veterans may be treated at Departmental expense by their own doctor in the hospital of their choice.

Professional staffs in Departmental institutions are employed on a part-time basis and the majority are members of medical faculties, nominated for staff positions by the dean of medicine. Close co-operation is maintained with medical schools, and the hospitals in the proximity of universities are actively engaged in medical teaching. The active-treatment hospitals have received approval of the Royal College of Physicians and Surgeons of Canada for postgraduate training in internal medicine and surgery, and the majority have been approved for advanced postgraduate teaching in the various specialties.

A program of Medical Research and Education was established in 1950 and has been gradually expanded. During the fiscal year 1956-57 some 95 projects were in progress, employing 105 persons. The program is varied and deals mostly with conditions affecting the older veteran, which the Department is in a unique position to investigate. Among the problems under study may be mentioned arthritis, hypertension and allied cardiac conditions, chronic respiratory diseases and mental conditions. Five of the larger hospitals operate clinical investigation units for provision of basic facilities such as detailed metabolic studies. Radioisotope laboratories are maintained at Toronto and Montreal.

During 1956-57, 30 persons received financial assistance from a research and educational grant for attendance at various courses. Schools for the training of nursing assistants were operated at Halifax, Montreal and Toronto with a potential of 180 graduates per year. These schools provide a reservoir of trained personnel for employment in Departmental hospitals. At Mar. 31, 1957, 135 nursing assistants were in the employ of the Department.

* Prepared by the Department of Veterans Affairs, Ottawa.

An Intern-Resident Program is maintained in the active-treatment hospitals and at the end of March 1957 some 253 interns and residents were in Departmental employ. In addition, training was provided for over 130 interns in occupational therapy, physiotherapy, psychology, laboratory and medical social services. These training programs are undertaken with the close co-operation of universities.

Members of the Armed Forces, Royal Canadian Mounted Police and sick mariners receive treatment in Departmental hospitals at the request and expense of the Departments concerned. In three of the active-treatment hospitals, special Armed Forces units staffed by National Defence personnel have been established as self-contained units within the hospitals. Any veteran may receive treatment in a Departmental hospital for a non-pensioned condition upon guarantee of full cost of hospitalization. During 1956-57 over 2,600 veterans were hospitalized under this plan. Certain veterans of limited income may receive treatment for non-pensioned conditions by payment of the costs on a sliding scale according to the adjusted income. The weekly average of those making some contribution was 280. In addition, a weekly average of 180 persons received free treatment.

Minor changes in veterans' legislation have been effected during the two years ended Mar. 31, 1957. Deductions from disability pensions for veterans under treatment as in-patients were eliminated. Authority was obtained to provide treatment for those who served with the United Nations Forces, other than those of Canada, in military operations undertaken by the United Nations to restore peace in Korea. Treatment is at the request and expense of the government concerned. The amount payable for overnight lodging for patients incurring this expense, when required by the Department or the Canadian Pension Commission to report for medical examination, was increased from \$3 to \$4.

Treatment for a non-pensioned neuropsychiatric disability was authorized on a sliding scale of payment according to income, so that treatment of these conditions is no longer available under more favourable circumstances than for other non-pensioned disabilities. Authority was obtained to provide treatment for non-pensioned disabilities and domiciliary care to members of the North West Field Force with recovery on a sliding scale basis. Minor changes were effected in funeral and burial grants. Certain amounts paid to veterans were exempted as income for all purposes of the Veterans Treatment Regulations including additions to pensions for attendance under Sect. 30 of the Pension Act; allowances for wear and tear of clothing and, under War Claims Regulations, compensation for maltreatment.

Dental Services.—Dental treatment is provided for those pensioned veterans whose disability would be alleviated by such treatment, for War Veterans Allowance recipients, and for other persons whose health care is the responsibility of the Department such as Royal Canadian Mounted Police personnel and members of the Canadian Forces. Treatment is also provided at the request of other governments.

The Department employs 37 full-time dentists, one half-time dentist and two dental consultants, specialists in their fields, on a part-time basis. Twenty-six dental clinics are maintained in Departmental hospitals or centres on a full-time or part-time basis. Elsewhere, the services of private dentists on a 'fee-for-service' basis are utilized.

Since 1948, 38 training courses for dental surgeons in various specialties of dentistry have been conducted by the Department. Many Departmental dentists have given instructional clinics at various national and regional conventions, participated in the research programs of their respective hospitals, and assisted the dental colleges by part-time lecturing.

Treatments provided by the Department in 1956-57 showed a slight increase over the previous year and all clinics and dentists were working well up to capacity. There were 18,105 courses of treatment given during the fiscal year, an increase of 987 cases and an increase of 5,009 in the total number of operations.

Prosthetic Services.—The Department of Veterans Affairs provides a complete coverage of prosthetic and orthopaedic appliances and sensory aid devices to Canada's disabled veterans and other Departments of Government. The primary issue is made on medical prescription. Maintenance and renewal are carried out at District Centres. Service is given without expense to the eligible veteran. Twelve centres or shops are located in or adjacent to the Departmental hospitals in major cities from coast to coast, and six sub-centres in smaller localities. Every effort is made to maintain a high standardization of stock parts and quality of materials supplied. The largest centre, located at Sunnybrook Hospital, Toronto, manufactures stock parts and is the central stores supply. It is one of the most complete centres of its kind in existence.

A research section is maintained for the design and testing of new materials and appliances. Among new developments that might be mentioned are the plastic Syme's leg with a solid ankle and sponge rubber foot, the Canadian Hip Disarticulation leg, the development of a motorized unit designed by the National Research Council for wheel chairs for quadraplegic cases. Many items, such as cosmetic gloves, mechanical hands, various new designs of arms, drop-foot splints and foam-sponge feet for artificial legs are still in the project stage.

During the year ended Mar. 31, 1957, service was provided to approximately 70,000 patients who received 143,000 issues.

Section 2.—Rehabilitation of Veterans

The Welfare Services Branch of the Department of Veterans Affairs, in addition to administering the rehabilitation benefits still available, renders welfare assistance to veterans, their dependants, widows and orphans. Specialized services are given by the Casualty, Social Service, Older Veterans and General Services Sections. This aspect of the work requires close liaison with other government departments—federal, provincial and municipal—as well as national and local welfare and rehabilitation organizations for co-operation and prevention of duplication of services.

War Service Gratuity.—The payment of war service gratuities was discontinued after Dec. 31, 1954, for World War II veterans except for those with overseas service who satisfy the Minister that they could not apply before that date as a result of unusual circumstances. The amounts paid in gratuities up to the end of the 1954-55 fiscal year are shown in the 1956 Year Book, p. 306. Those paid in 1955-56 and 1956-57 and the cumulative totals were:—

<i>Year</i>	<i>World War II Veterans</i>	<i>Special Force Veterans</i>
	\$	\$
1955-56.....	30,536	16,932
1956-57.....	9,457	7,351
Totals to Mar. 31, 1957.....	470,012,032	6,688,822

Re-establishment Credit.—On Mar. 31, 1957, the amount of \$21,680,134 in re-establishment credit, out of nearly \$325,000,000, had not yet been authorized on behalf of the veterans entitled to claim it. These veterans have until Dec. 31, 1959, or 15 years after discharge, whichever is the later, to apply for their unused credit. The amounts paid during 1955-56 and 1956-57, and the cumulative totals to Mar. 31, 1957, by required purposes, are shown in Table 1.

1.—Re-establishment Credits Paid by Required Purpose, Years Ended Mar. 31, 1956 and 1957 with Cumulative Totals to Mar. 31, 1957

Purpose	1956	1957	Cumulative Total to Mar. 31, 1957
	\$	\$	\$
Homes	2,471,283	1,432,454	237,948,469
Purchased under National Housing Act.....	24,646	20,991	3,325,522
Purchased other than under National Housing Act.....	154,665	107,324	32,334,376
Repairs, etc.....	200,694	130,800	16,552,607
Furniture and equipment.....	2,057,002	1,154,285	181,274,207
Reduction of mortgage.....	34,276	19,054	4,461,757
Business	678,014	280,916	55,054,559
Purchase of a business.....	8,119	3,470	3,674,952
Working capital.....	311,320	66,109	25,207,274
Tools and equipment.....	358,575	211,337	26,172,333
Miscellaneous	402,540	389,891	9,775,881
Insurance, annuities, etc.....	351,438	201,719	8,763,650
Special equipment for training.....	25,041	17,852	716,256
Clothing.....	26,061	21,889	147,544
Reimbursements.....	—	148,431	148,431
Totals	3,551,837	2,103,261	302,778,909

Casualty Rehabilitation.—The work of the Casualty Welfare Division continued to increase during the two years ended Mar. 31, 1957, by which date the number of disabled veterans registered had risen to 43,123, an increase of 2,454 from Mar. 31, 1955. During the 1956-57 fiscal year, 1,294 disabled veterans registered with the Division but 1,898 cases were closed, resulting in a reduction over the year of more than 600 in the number of active cases. The number of active cases at Mar. 31, 1957, was 4,257.

The function of the Casualty Welfare Division is outlined in the 1956 Year Book, p. 307. Statistics up to Mar. 31, 1957, showing the registrations by type of disability and the status at that date of those registered, are given in Table 2.

2.—Total Registrations for Casualty Rehabilitation by Type of Disability up to Mar. 31, 1957 and Status of Registrants as at Mar. 31, 1956 and 1957

Type of Disability	Active Cases	Closed Cases	Status	Mar. 31, 1956	Mar. 31, 1957
	No.	No.		No.	No.
Amputation.....	156	2,241	Employed.....	33,764	34,893
Neuro-muscular and skeletal system disabilities.....	1,018	12,217	Unemployed.....	972	777
Total and partial loss of hearing or sight.....	195	2,960	Receiving treatment, training or other services.....	1,900	1,824
Neurological cases.....	236	1,459	Rehabilitation not feasible.....	2,911	3,082
Heart and vascular system.....	269	3,718	Closed on WVA.....	1,294	1,492
Respiratory disabilities.....	1,536	10,172	Left Canada.....	988	1,055
Mental and emotional disabilities.....	337	1,031			
Unclassified.....	510	5,068			
Totals	4,257	38,866	Totals	41,829	43,123

Social Services.—The Social Services Division provides a "case work" service to veterans and their dependants, and a social welfare consultant service to other Departmental officials dealing with welfare matters. It maintains liaison with welfare departments at all levels of government and with private social and philanthropic agencies.

The Division has specific responsibilities in connection with the operation of the Assistance Fund, which is available to War Veterans Allowance recipients who are in need (*see below*) and, at the request of the Department of National Defence, furnishes reports on home circumstances of Armed Forces personnel who request compassionate leave, posting or discharge. The latter service provides information on which decisions may be based and may help those concerned through counselling and referral to community social services.

During the year ended Mar. 31, 1957, there were received 13,689 requests for services from all sources, a slight increase over the previous year.

Rehabilitation of Older Veterans.—During the two years ended Mar. 31, 1957, liaison was continued and extended with the Department of Labour, National Employment Service, Canadian Corps of Commissionaires, Canadian Legion and other public and private organizations through which older veterans and their dependants are assisted to find employment matched to their physical and mental abilities. Assistance was also provided to the Canadian Welfare Council, universities and other bodies in their efforts to study and publicize the problems and needs of those who, on account of age, often coupled with physical, mental or economic handicaps, need help in obtaining or retaining suitable employment.

The Welfare Services Division continued to review all rejected applications for War Veterans Allowance to ensure that any alternative services, for which the applicant may be eligible, are brought to the attention of the veteran or widow.

At Mar. 31, 1957, there were 10,589 World War I and dual-service veterans registered for employment with the National Employment Service, a decrease of 653 over the previous year. At the same date there were 4,869 veterans employed in the Corps of Commissionaires, 2,410 by the Federal Government and 2,459 with provincial and municipal government and private organizations.

Assistance Fund.—Supplementary financial assistance is provided by the Assistance Fund to recipients under the War Veterans Allowance Act (*see p. 304*) who are in need. Assistance may be given as a continuing monthly grant in accordance with a formula which includes costs of shelter, fuel, food, clothing, personal care and certain health needs, or in single grants to meet needs not covered by the formula. During the two years ended Mar. 31, 1957, the maximum assistance available from the Fund was \$120 and \$144 per annum respectively to single and married recipients of WVA. However, these amounts were increased to \$240 and \$180 per year respectively as a result of the increases in rates and ceilings of the WVA Act which became effective on July 1, 1957.

Field work for the fund is done almost entirely by the Welfare Services Branch which, through counselling and referral, also assists applicants in other ways. Since a monthly Assistance Fund grant can be continued without interruption until there is a change in the recipient's financial circumstances the number of people assisted in any fiscal year is greater than the number applying during that period. A statistical summary of Fund activity during the years ended Mar. 31, 1956 and 1957 is as follows:—

<i>Item</i>	<i>Mar. 31, 1956</i>	<i>Mar. 31, 1957</i>
Persons assisted.....No.	6,256	8,331
Persons applying during year.....“	3,847	4,765
Applicants assisted.....“	3,074	4,273
Proportion of applicants assisted.....p.c.	80	90
Fund expenditures during year.....\$	509,624	741,895
Proportion of expenditures given in monthly grants.....p.c.	78	78
Persons in receipt of continuing monthly grants.....No.	4,058	5,949

Education and Training.—By the end of March 1957, very few veterans were still eligible for training under the Veterans Rehabilitation Act and the Veterans Benefit Act, 1954. Still eligible were a few with service in the Korean theatre who had not been released from the Armed Forces, and those seriously disabled veterans whose rehabilitation could be assisted by training or retraining.

At Mar. 31, 1957, there were 119 World War II veterans and 42 of the Korean Operation taking university courses, and 65 and 44 respectively receiving vocational training.

Pensioned veterans of World War I and ex-members of the Regular and Reserve Forces who are also in receipt of pensions may be given training under the Pensioners Training Regulations if required to fit them for suitable employment. At the end of the 1956-57 fiscal year, eight such pensioners were taking university courses and 10 were receiving vocational training.

Children of deceased veterans are also eligible for training, under the terms of the Children of War Dead (Education Assistance) Act, if the Canadian Pension Commission has ruled that the deaths were attributable to war service and if, at some time, a pension has been paid on behalf of the children concerned. Assistance for an approved student consists of a training allowance of \$25 per month while in attendance at a training institution, and prescribed fees not exceeding \$500 for each academic year.

Awaiting Returns Allowance.—Only veterans who are settled under the Veterans' Land Act as full-time farmers or commercial fishermen are still eligible for awaiting returns allowances, which are \$50 per month for a single veteran and \$70 for a man and wife plus allowances for children. The allowance must be applied for within the year following settlement under VLA. Its purpose is to provide maintenance for the veteran and his family until an income has been developed from the farming or fishing venture and, in any event, it may not be continued for more than 12 months.

Up to Mar. 31, 1957, 62,732 veterans, including 55 ex-members of the Special Force, were approved for these allowances and 91 p.c. of them were discontinued as established. The total amount expended for this allowance from inception to the end of the 1956-57 fiscal year was \$27,129,445. At Mar. 31, 1957 there were 222 active cases.

Vetcraft Shops.—Vetcraft Shops manufacture poppies and wreaths to be distributed and sold by the Canadian Legion for Remembrance Day, thus providing sheltered employment to some 41 veterans as poppy workers and some 32 dependants as home workers on piece-work rates. Shops are operated at Toronto and Montreal with additional home assembly work being carried out at Winnipeg, Regina and Calgary. Some 6,300,000 poppies and 58,000 wreaths of a floralcraft type were manufactured for the 1956 campaign.

Section 3.—Life Insurance

Returned Soldiers' Insurance.—This insurance, issued under the authority of the Returned Soldiers' Insurance Act, was available to veterans of World War I. No applications were accepted after Aug. 31, 1933. A brief summary of Returned Soldiers' Insurance appears in the 1956 Year Book.

On Mar. 31, 1957, of the total of 48,319 policies issued there remained 11,322 policies in force for a face amount of \$23,864,638. Of these policies 3,259 were premium-paying, 7,135 were paid-up, 153 had been converted to Extended Term Insurance, and 775 were being covered under the disability provision of the policy contracts. Terminations from 1920 to 1957 totalled 36,997, of which 11,469 were by death, 16,642 by surrender for the cash value and 8,886 by lapse, expiry, or other mode of termination.

Veterans Insurance.—Veterans Insurance was available to veterans of World War II and of the Korean action. A brief summary of Veterans Insurance appears in the 1956 Year Book. As the period of eligibility to contract for this insurance for World War II veterans expired (except for veterans who still have unused Re-establishment Credit) ten years after their discharge, comparatively few of these veterans are now eligible. Korean veterans may contract for the insurance until Oct. 31, 1958.

The legislation has permitted acceptance of a markedly high proportion of the applications received, fewer than two per 1,000 having been declined. Of the 41,824 policies issued only 4.2 p.c. have lapsed during the first two policy years, an unusually low ratio. At the

end of March 1957, there were 29,655 policies in force with a face value of \$90,045,191. The death claim experience has followed a consistent pattern and is closely related to that observed for the general population.

3.—Death Claims Intimated, Years Ended Mar. 31, 1946-57 with Cumulative Totals 1921-45

Year Ended Mar. 31—	Returned Soldiers Insurance		Veterans Insurance	
	No.	\$	No.	\$
1921-45.....	6,874	15,086,330	—	—
1946.....	331	636,100	3	11,500
1947.....	282	533,969	26	72,500
1948.....	304	597,985	54	169,500
1949.....	337	655,898	91	233,000
1950.....	402	679,621	108	318,580
1951.....	379	720,810	122	370,000
1952.....	418	817,559	178	461,500
1953.....	412	813,446	189	544,500
1954.....	421	821,930	187	495,500
1955.....	428	799,440	177	512,740
1956.....	434	813,743	216	590,868
1957.....	447	842,608	225	639,048

Section 4.—Land Settlement and Home Construction

Veterans' Land Act.—The Veterans' Land Act Branch is organized into eight Districts comprising 32 Regional Offices and 243 field areas across Canada. A resident Field Supervisor is responsible for each area and each Supervisor has an average of 250 active accounts involving a gross initial public investment of close to \$1,500,000. Each Field Supervisor is responsible for the sound appraisal of properties and the implementing of the Branch's supervised credit program through which veterans are assisted in the organization and management of their farms.

There are also 93 Construction Supervisors throughout the country whose main duties consist of giving practical advice to veteran-builders and supervising the actual construction, remodelling or extension of homes and other buildings. A continuous and progressive on-the-job program of staff training is conducted to ensure that the Supervisors keep abreast of the latest developments and newest techniques in land appraisal, farm organization, farm management and construction.

During the two years ended Mar. 31, 1957, \$23,963,805 became due under Veterans' Land Act contracts with veterans who paid, including pre-payments, \$24,142,354. As a further indication of the effectiveness of the supervised credit program of the Branch, less than 2 p.c. of the active accounts had arrears in excess of \$200, if on annual or semi-annual payments, or \$100 if paying monthly.

Nearly 22,000 settlers are using pre-arranged systems of making payments, 14,359 of whom are using post-dated cheque plans. A further 6,376 have given orders on pensions or have made salary assignments and, at the end of March 1957, there were 1,134 share-of-crop agreements in effect in the spring wheat areas of the Prairie Provinces. In addition, 2,610 veterans have completely repaid their contract debts.

The settlement of veterans of World War II and the Special Force under the Veterans' Land Act falls within four broad categories: farming or fishing as a full-time occupation; part-time farming in rural or semi-rural areas to supplement income from other employment; settlement, in general, or on pioneer land under agreements between the Federal Government and the provinces; and home building on city-sized lots by veterans who have been approved for a loan under the National Housing Act and who act as their own contractors.

The amounts of financial assistance and the repayment terms differ for the various types of settlement. A veteran being settled as a full-time farmer on other than provincial land may obtain financial assistance under Part I of the Act to a maximum of \$6,000 including \$1,200 for livestock and farm equipment, and \$3,000 under Part III of the Act.

Of the amount approved under Part I, exclusive of that for livestock and farm equipment, 10 p.c. is repayable as a down payment and 66 $\frac{2}{3}$ p.c. is repayable with interest at 3 $\frac{1}{2}$ p.c. over a maximum period of 25 years. Assistance under Part III is available on the basis of the veteran making a contribution of \$1 in cash or equivalent value for each \$2 loaned with the amount loaned fully repayable with interest at the rate of 5 p.c.

Part-time farmers and commercial fishermen may obtain financial assistance up to \$6,000 under Part I and \$1,400 under Part III. The amounts repayable and the interest rates are similar to those for full-time farmers.

Veterans being settled on federal or provincial lands and Indian veterans being settled on Indian reserves may obtain a grant of \$2,320 which is non-repayable provided they meet settlement terms and conditions for a period of 10 years.

Under Part II of the Act any qualified veteran, who has been approved for a loan under the National Housing Act may receive financial and other assistance to build his own home on any lot suitable for a single family dwelling. The maximum financial assistance available is \$8,000 which is repayable under a mortgage contract at the rate of interest chargeable under the National Housing Act.

At the end of March 1957, a total of \$382,792,157 had been expended on behalf of 75,356 veterans. There were 60,981 of the accounts still active at Mar. 31, 1957, including 1,500 Indian veterans settled on Indian reserves whose accounts are administered by the Department of Citizenship and Immigration. During the fiscal year 1956-57 approvals for assistance were made on behalf of 2,815 veterans of World War II and the Special Force including 526 for full-time farming; 1,867 for part-time farming; 25 for commercial fishing; 37 for settlement on Indian reserves; and 396 for home building on city-size lots. There were also 698 additional loans made to established full-time farmers under the provisions of Part III of the Act. These approvals involved the expenditure of approximately \$21,000,000 of public funds.

To Mar. 31, 1957, a total of 21,538 houses had been completed and another 1,838 were under construction. The 1,697 houses completed in 1956-57 was the highest total for any year since 1951-52. There were 1,397 new houses started during the year and another 946 veterans received approval to effect additions or improvements to their homes and other buildings.

A total of 10,367 veterans had earned their conditional grants as of Mar. 31, 1957, of which number 8,722 were earned in the fiscal year 1956-57. Titles to properties or chattels, or both, have been received by 3,473 of these veterans.

4.—Summary of Settlement Status, Loans and Grants under the Veterans' Land Act as at Mar. 31, 1957¹

Item	Full-Time Farming	Small Holdings	Commercial Fishing	Mortgage Loans	Provincial Lands	Federal Lands	City-Size Lots	Total
Qualified but not yet settled..... No.	3,521	12,732	118	²	251	65	1,903	18,590
Approved for financial assistance..... No.	27,045	38,645	1,055	957	4,773	429	915	73,819
Amount approved for land and permanent improvements..... \$	110,613,560	197,477,073	3,339,678	1,242,497	4,517,447	897,061	7,263,854	325,351,170
Amounts approved for stock and equipment \$	32,423,341	8,043,462	1,083,046	772,966	6,082,700	12,037	...	48,417,552
Average amount approved per veteran.. \$	5,289	5,318	4,192	2,106	2,220	2,119	7,939	5,063
Average conditional grant per veteran... \$	2,014	1,318	1,661	...	2,220	2,119	...	1,649

¹ Excludes Indian veterans on reserves.

² Included with full-time farming and small holdings.

5.—Summary of House Construction under the Veterans' Land Act as at Mar. 31, 1957

Item	Full-Time Farming	Small Holdings	Commercial Fishing	Provincial Lands	Federal Lands	City-Size Lots	Total
	No.	No.	No.	No.	No.	No.	No.
Houses completed (from 1942).....	1,457	18,036	269	1,257	112	407	21,538
Houses under construction.....	160	1,020	7	178	10	463	1,838
Houses projected.....	240	574	9	128	2	2	955
Net Applications for New Housing	1,857	19,630	285	1,563	124	872	24,331

Section 5.—Pensions Advocates

Veterans Bureau.—The Veterans Bureau, which has completed its twenty-sixth year of operation, is a branch of the Department of Veterans Affairs and has an office under the direction of a District Pensions Advocate in all districts in Canada in which offices of the Department are situated.

During the year ended Mar. 31, 1957, 5,861 claims were submitted to the Pension Commission, with 8,103 in preparation at the end of the year. These figures showed little change from the 5,833 claims submitted during the previous fiscal year and 8,276 in preparation at the end of that year.

The duties of Pensions Advocates, most of whom are lawyers, are to assist former members of the Armed Forces and their dependants and former members of the various auxiliary organizations, such as merchant seamen, firefighters and others, in preparing and submitting claims to the Canadian Pension Commission. They also appear as counsel for applicants before the Appeal Boards of the Commission. No charge is made for the services of the Bureau.

Section 6.—Veterans Pensions

Previous issues of the Year Book contain information on the development of Canadian pension legislation, together with yearly statistics of numbers and liabilities. In the 1956 edition, pension data is given on pp. 304-305.

On Mar. 14, 1957, the Minister of Finance, in his Budget Speech, announced an upward revision in the basic scale of pensions under the Pension Act and an increase in the maximum helplessness allowance payable under the Act, to become effective July 1, 1957. This revision was given Parliamentary sanction in April 1957. It represents the third increase in basic pensions in the past ten years, the current rates being exactly double those which were in effect from 1920 to 1947. Over 159,000 disability pensioners benefited from the increases at an estimated increase in annual liability of \$15,150,248. Additionally, the estimated increase in annual liability for dependants, widows and parents, will be \$4,647,259.

The following gives a comparison of the new rates with those formerly in effect:—

Item	Former Monthly Rate	Monthly Rate Effective July 1, 1957
	\$	\$
Single pensioner, 100 p.c. disability.....	125	150
Married pensioner, 100 p.c. disability.....	170	200
Pensioned widow.....	100	115
Dependent parent, maximum award.....	75	90
Two dependent parents, maximum award.....	100	115

The new rates result in the basic scale being the same for all ranks up to and including Lieutenant-Colonel and equivalent ranks. Slightly higher rates are provided for Colonel and higher ranks and, although these were not increased, a married disability pensioner who held one of these ranks will benefit by the increase in additional pension for a wife, which is the same for all ranks.

The rates for children were not increased and for 100 p.c. disability pensioners (all ranks) they are \$20 a month for the first child, \$15 a month for the second child and \$12 a month for the third and any subsequent children.

Helplessness allowance, which is payable to a pensioner who is totally disabled and in need of attendance and which varies depending on the amount of attendance required, is paid in addition to pension. The maximum has been increased from \$1,400 to \$1,800 per annum.

The widow of a Lieutenant-Colonel or lower rank is now entitled to \$115 a month for herself and monthly payments of \$40 for the first child, \$30 for the second child and \$24 for the third and any subsequent children.

While the rates of pension for disability and pensioned widows are statutory and adjustments were made by Treasury Branch without reference to the Canadian Pension Commission, amounts payable to parents and in respect of helplessness are not fixed and a review of many thousands of cases was necessitated.

The Civilian War Pensions and Allowances Act.—This Act provides for the payment of pensions to, or on behalf of, persons who served in certain civilian groups that were closely associated with the World War II war effort, and who suffered injury or death as a result of such service. Among these groups are merchant seamen, salt-water fishermen, auxiliary services personnel, ferry pilots of the RAF Transport Command, firefighters who served in the United Kingdom, etc.

6.—Pensions in Force under the Pension Act as at Mar. 31, 1957

Service	Disability		Dependant		Disability and Dependant	
	Pensions in Force	Liability	Pensions in Force	Liability	Pensions in Force	Liability
	No.	\$	No.	\$	No.	\$
World War I.....	54,409	35,979,827	15,040	16,980,655	69,449	52,960,482
World War II.....	102,514	56,619,776	18,199	17,219,087	120,713	73,838,863
Peacetime.....	821	395,886	389	592,030	1,210	987,916
Special Force.....	1,411	630,832	152	174,732	1,563	805,564
Totals.....	159,155	93,626,321	33,780	34,966,504	192,935	128,592,825

Section 7.—War Veterans Allowances

War Veterans Allowances are payable, in Canada only, to Canadian veterans of the Northwest Field Force, the South African War, World Wars I and II and the Korean Operation; and to veterans of Commonwealth and Allied forces who were domiciled in Canada at time of enlistment or, alternatively, have resided in Canada for 20 years. Allowances may also be paid to widows or orphans of eligible veterans. To be eligible for an allowance, a veteran must have served in both World Wars I and II and have been honourably discharged. Allowances are awarded subject to certain financial limitations to those whose age or physical and mental conditions meet the requirements of the Act.

The development of these allowances is reported in previous issues of the Year Book and the main provisions of the present Act are outlined in the 1956 edition at pp. 313-314.

While no changes* have since been made in the Act, provision was included in the Budget of Mar. 14, 1957, for increased rates and ceilings to be effective on July 1, 1957. On that date the maximum rates and annual income ceilings became:—

<i>Recipient</i>	<i>Monthly Maximum Allowance</i>	<i>Annual Income Ceiling</i>
	\$	\$
Veterans and widow(er)s, single status.....	60	960
Veterans and widow(er)s, married status.....	120	1,620
Veterans with blind spouse.....	120	1,740
One orphan.....	40	720
Two orphans of one veteran.....	70	1,200
Three or more orphans of one veteran.....	85	1,440

At the time these changes were announced, it was estimated that the increase would add nearly \$6,000,000 to the annual liability for the allowances.

The number of veterans and others in receipt of allowances at the close of each of the fiscal years 1952-57, and the amounts of allowances paid, are as follows:—

<i>As at Mar. 31—</i>	<i>Veterans in Receipt of Allowances</i>	<i>Others in Receipt of Allowances</i>	<i>Total in Receipt of Allowances</i>	<i>Expenditures</i>
	No.	No.	No.	\$
1952.....	29,137	9,602	38,739	23,544,760
1953.....	30,005	10,607	40,612	27,114,849
1954.....	30,650	11,737	42,387	26,486,988
1955.....	32,471	12,883	45,354	27,702,077
1956.....	37,907	14,347	52,254	39,074,156
1957.....	39,664	15,578	55,242	41,259,185

During the year ended Mar. 31, 1957, 56,165 cases were reviewed by the 18 District Authorities across Canada, and 16,160 by the War Veterans Allowance Board at Ottawa (see below), so that changes in the financial, physical or domestic circumstances of the recipients concerned might be reflected in the allowances being paid. Of the 412 decisions appealed during the year, 32 were allowed and 380 were disallowed.

Section 8.—Veterans Commissions and Boards

Canadian Pension Commission.—The Canadian Pension Commission is a statutory body charged with the administration of the Pension Act and the Civilian War Pensions and Allowances Act. The members of the Commission are appointed by the Governor in Council who may also impose upon the Commission duties in respect of any grants in the nature of pensions, etc., made under any statute other than the Pension Act. It reports to Parliament through the Minister of Veterans Affairs.

It is the responsibility of the Commission to adjudicate on claims for injury or disease resulting in disability or death, incurred during service with the Canadian Navy, Army or Air Force during war or peacetime. The Commission may also supplement certain awards of pension made by the British or Allied Governments (see 1956 Year Book, p. 304).

The Commission's representatives across Canada are called Pension Medical Examiners and they are located in most of the district offices of the Department of Veterans Affairs.

War Veterans Allowance Board.—The War Veterans Allowance Board is a statutory body set up to administer the War Veterans Allowance Act. The members are appointed by the Governor in Council and the Board reports to Parliament through the Minister of Veterans Affairs. Administration of the Act is decentralized across Canada through 18 District Authorities located in the district offices of the Department of Veterans Affairs.

* Effective Nov. 1, 1957, the Act was further amended by increasing the single rate to \$70 per month and by raising the annual income ceilings to \$1,080 for single recipients and \$1,740 for those who are married. Some changes were made also in the eligibility requirements with the result that additional groups of veterans and dependants may now be awarded allowances.

Much of the information on which decisions on applications for allowances are based is provided through investigations carried out by officers of the Veterans Welfare Services Branch.

In addition to defining policy, the Board adjudicates on appeals from decisions of the District Authorities and periodically reviews, on its own initiative, decisions of these Authorities.

Imperial War Graves Commission.—All Commonwealth Governments are members of the Commission, incorporated by Royal Charter in 1917, and are represented by their High Commissioners in London. The Commission is entrusted with the marking and maintenance, in perpetuity, of the graves of those of the British Commonwealth Armed Forces who lost their lives between Aug. 4, 1914 and Aug. 31, 1921, and between Sept. 3, 1939 and Dec. 31, 1947. The Commission erects memorials to commemorate those in unknown graves.

The Minister of Veterans Affairs is the Agent of the Commission in Canada and the office of the Secretary-General of the Canadian Agency is in the Veterans Affairs Building, Ottawa.

The area of responsibility of the Canadian Agency is the Continent of North America but it has also certain duties of inspection in Argentina, Bahamas, Barbados, Bermuda, Brazil, British Guiana, British Honduras, Chile, Costa Rica, Cuba, Falkland Islands, French West Indies, Guatemala, Hawaiian Islands, Jamaica, Leeward Islands, Netherlands Antilles, Panama Canal Zone, Peru, Puerto Rico, Trinidad, Uruguay, and Windward Islands.

In North America the Agency is responsible for about 13,000 War Graves in over 2,000 cemeteries. Approximately 3,400 servicemen of both wars, missing in operations while based in North America, are commemorated on the memorials erected at Victoria, B.C., and at Halifax, N.S.

It is expected that construction will be started early in 1958 on a memorial in Ottawa commemorating by name approximately 850 Commonwealth Air Forces servicemen who lost their lives in the Second World War while on operations from bases in Canada and the United States, and who have no known grave.

CHAPTER VII.—CRIME AND DELINQUENCY*

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Section 1.—Canadian Criminal Law and Procedure†

The system under which justice is administered in a State is never rigid. To have it so would be neither expedient nor indeed possible. A judicial system must grow and adapt itself to the requirements of the people and the exact limits of the powers of different legislative bodies require continued definition.

The criminal law of Canada has as its foundation the criminal common law of England built up through the ages and consisting first of customs and usages, and later expanded by principles enunciated by generations of judges. There is no statutory declaration of the introduction of English criminal law into those parts of Canada that are now the Provinces of New Brunswick, Nova Scotia and Prince Edward Island. Its introduction there depends upon a principle of the common law itself by which English law was declared to be in force in uninhabited territory discovered and planted by British subjects, except in so far as local conditions made it inapplicable. The same may be said of Newfoundland although the colony dealt with the subject in a statute of 1837. In Quebec its reception depends upon a Royal Proclamation of 1763 and the Quebec Act of 1774. In each of the other provinces and in the Yukon and Northwest Territories the matter has been dealt with by statute.

The judicial systems of the provinces as they exist today are based upon the British North America Act of 1867. Sect. 91 of the Act provides that "The exclusive legislative authority of the Parliament of Canada extends to . . . the criminal law, except the constitution of courts of criminal jurisdiction but including the procedure in criminal matters". By Sect. 92 (14), the legislature of the province exclusively may make laws in relation to "the administration of justice in the province, including the constitution, maintenance and

* Except as otherwise credited, this Chapter has been revised in the Judicial Section, Health and Welfare Division, Dominion Bureau of Statistics.

† Prepared by the Criminal Law Section, Department of Justice, Ottawa.

organization of provincial courts, both of civil and criminal jurisdiction and including procedure in civil matters in its courts". The Parliament of Canada may, however, (Sect. 101) establish any additional courts for the better administration of the laws of Canada. It should be noted that the Statute of Westminster, 1931, effected important changes particularly by abrogating the Colonial Laws Validity Act, 1865 (U.K.), and confirming the right of a dominion to make laws having extraterritorial operation. Particulars of the federal judiciaries are given in Chapter II, pp. 42-43 and provincial judiciaries are dealt with briefly at pp. 43-44; more detailed information on provincial judiciaries is given in the 1954 Year Book, pp. 48-55.

At the time of Confederation each of the colonies affected had its own body of statutes relating to the criminal law. In 1869 in an endeavour to assimilate them into a uniform system applicable throughout Canada, Parliament passed a series of Acts some of which dealt with offences of special kinds and others with procedure. Most notable of the latter was the Criminal Procedure Act, but other Acts provided for the speedy trial or summary trial of indictable offences, the powers and jurisdiction of justices of the peace in summary conviction matters and otherwise, and the procedure in respect of juvenile offenders.

Codification of the criminal law through a Criminal Code Bill founded on the English draft code of 1878, Stephen's *Digest of Criminal Law*, Burbidge's *Digest of the Canadian Criminal Law*, and the relevant Canadian statutes was brought about by the Minister of Justice, Sir John Thompson, in 1892. This Bill became the Criminal Code of Canada and came into force on July 1, 1893. It must be remembered, however, that the Criminal Code was not exhaustive of the criminal law. It was still necessary to refer to English law in certain matters of procedure and it was still possible to prosecute for offences at common law. Moreover, Parliament has declared offences against certain other Acts, e.g., the Opium and Narcotic Drug Act, to be criminal offences and the same was done in the Defence of Canada Regulations and the Wartime Prices and Trade Board Regulations (neither now in force) promulgated under the authority of the War Measures Act.

It is often difficult to distinguish between 'law' and 'procedure'. Procedure may be interpreted to relate simply to the organic working of the courts but, in a wider sense, it may also affect the rights or alter the legal relations arising out of any given state of facts. For present purposes it will be useful to note that writers on jurisprudence describe law as being substantive or adjective. "Substantive law is concerned with the ends which the administration of justice seeks; procedural (adjective) law deals with the means and instruments by which these ends are to be obtained."* With reference to the criminal law the former may be taken to include the provisions concerning criminal responsibility, the definition of 'offences' and the punishment for those offences, and the latter to include provisions for enforcement, e.g., powers to search and to arrest, for the modes of trial and for the proof of facts. Broadly speaking, the Criminal Code observes the distinction although it might appear that the provisions for preventive detention of habitual criminals and criminal sexual psychopaths partake of the nature of both classes.

An examination and study of the Criminal Code was authorized by Order in Council dated Feb. 3, 1949, and the Commission assigned the task of revising the Code presented its report with a draft Bill in February 1952. After coming before successive sessions of Parliament it was finally passed on June 15, 1954, and the new Criminal Code (2-3 Eliz. II, c. 51) came into effect on Apr. 1, 1955. A short outline of the system that existed under the repealed Code together with the major revisions effected by the new Code is given in the 1955 Year Book, pp. 295-298.

Since the Code came into force amendments have been few and of minor importance. An amendment relating to race meetings was passed in 1955 and in 1956 it was provided that motions for leave to appeal to the Supreme Court of Canada in criminal cases should be heard by a quorum (at least five) of the judges of that Court instead of by a single judge.

* Salmond on *Jurisprudence*, 7th Edition, p. 496.

Section 2.—Adult Offenders and Convictions

The main interest in criminal statistics is concerned with those persons guilty of the more serious crimes. Such offenders are fewer than those who commit summary conviction offences but, from the standpoint of the protection of society, they are more important.

In 1949 the basis of the statistics of indictable crimes was changed from *convictions* to *persons* so that the figures for 1949 and subsequent years are not comparable with those for previous years. Where any person is prosecuted at the same hearing for several offences, one offence must be selected for tabulation. The rule followed is to select that for which the proceedings were carried to the furthest stage—to conviction and sentence if the prisoner were tried on several charges; if there were several convictions, the offence selected is that for which the heaviest punishment was awarded; if the final result of proceedings on two or more charges were the same, the most serious offence (as measured by the maximum penalty allowed by the law) appears in the tables. Where a person was prosecuted for one offence and convicted of another (e.g., charged with murder and convicted of manslaughter), the case appears only under the offence for which he was convicted.

In the case of summary conviction offences the figures continue to be based on convictions and are thus comparable with those for earlier years.

Statistics include only cases finally determined within the year. Cases not entirely disposed of within the year (e.g., tried but sentence postponed) are held over for the next year's report.

Subsection 1.—Adults Convicted of Indictable Offences

During 1955 the courts of Canada dealt with 32,367 adults charged with 54,252 indictable crimes, of whom 28,273 were found guilty of 46,239 offences. These figures show little change from those of 1954 when 35,278 adults were charged with 56,847 indictable crimes and 30,848 were found guilty of 47,981 offences.

1.—Adults Convicted of Indictable Offences and Ratio per 10,000 Population 16 Years of Age or Over, by Province 1954 and 1955

Province or Territory	1954		1955	
	Persons Convicted	Ratio per 10,000 Population ¹	Persons Convicted	Ratio per 10,000 Population ¹
	No.	No.	No.	No.
Newfoundland.....	645	28	611	26
Prince Edward Island.....	171	25	129	19
Nova Scotia.....	1,526	35	1,570	35
New Brunswick.....	735	22	751	22
Quebec.....	6,525	23	6,391	22
Ontario.....	12,412	35	10,836	30
Manitoba.....	1,739	31	1,558	27
Saskatchewan.....	1,184	20	1,072	18
Alberta.....	2,383	35	2,251	32
British Columbia.....	3,471	39	3,102	34
Yukon and Northwest Territories.....	57	—	2	—
Canada.....	30,848	30	28,273	27

¹ Per 10,000 population 16 years of age or over excluding the Yukon and Northwest Territories.

Indictable offences are grouped into six classes as shown in Table 2. In 1955 persons convicted of assaults of various kinds and obstructing police represented 79.4 p.c. of Class I, which covers crimes against the person. In that year 16 persons were convicted of murder, 7 of attempted murder and 43 of manslaughter as compared with 15, 4 and 81 respectively in 1954.

Classes II to V cover offences against property. Thieves predominate among the offenders in these classes, and burglars and robbers whose serious crimes involve acts of violence are the next most numerous. In Class VI which includes miscellaneous offences the most numerous convictions are for offences connected with the improper operation of motor vehicles. In 1955 there were 349 offenders under the Opium and Narcotic Drug Act, of whom 242 were convicted of possessing heroin, 249 were males and 308 were born in Canada. British Columbia courts convicted 59.3 p.c. of the drug offenders and Ontario courts 23.2 p.c.

2.—Adults Charged and Convicted of Indictable Offences by Class of Offence 1954 and 1955

Class and Offence	1954			1955			Increase or Decrease in Persons Convicted
	Adults Charged	Adults Convicted		Adults Charged	Adults Convicted		
		M.	F.		M.	F.	
	No.	No.	No.	No.	No.	No.	p.c.
Class I.—Offences against the Person	7,066	5,274	277	6,323	4,676	221	-11.8
Abduction.....	26	17	1	24	8	4	-33.3
Assault, common, aggravated and on police.....	4,802	3,539	226	4,486	3,330	153	- 7.5
Offences against females ¹	1,083	834	10	855	641	19	-21.8
Manslaughter and murder.....	169	90	6	112	55	4	-38.5
Attempted murder; shooting and wounding.....	290	202	15	175	119	11	-40.1
Non-support, desertion.....	162	134	4	92	70	4	-46.4
Other offences against the person...	534	458	15	579	453	26	+ 1.3
Class II.—Offences against Property with Violence	5,181	4,678	65	5,020	4,542	64	- 2.9
Burglary and robbery.....	5,181	4,678	65	5,020	4,542	64	- 2.9
Class III.—Offences against Property without Violence	12,836	10,574	886	12,101	9,914	874	- 5.9
Fraud, embezzlement and false pretences.....	2,017	1,645	136	1,935	1,542	139	- 5.6
Receiving stolen goods.....	1,109	899	34	1,071	823	55	- 5.9
Theft.....	9,710	8,030	716	9,095	7,549	680	- 5.9
Class IV.—Malicious Offences against Property	381	312	15	603	464	30	+51.1
Arson.....	74	55	5	107	63	14	+28.3
Malicious damage to property.....	307	257	10	496	401	16	+56.2
Class V.—Forgery and Other Offences against the Currency	742	636	75	764	661	65	+ 2.1
Offences against currency.....	5	4	—	14	10	—	+150.0
Forgery and uttering forged documents.....	737	632	75	750	651	65	+ 1.3
Class VI.—Offences not included in the Foregoing Classes	9,072	7,561	495	7,556	6,311	451	-16.1
Dangerous or reckless driving.....	847	656	6	307	245	3	-62.5
Driving car while ability impaired.....	3,690	3,505	41	3,161	2,985	40	-14.7
Driving car while drunk.....	1,100	897	6	751	641	10	-27.9
Opium and Narcotic Drug Act, offences against.....	351	239	67	396	249	100	+14.1
Gambling and lotteries.....	442	341	40	684	566	36	+58.0
Keeping bawdy houses and inmates.....	287	51	196	265	65	137	-18.2
Various.....	2,355	1,872	139	1,992	1,560	125	-16.2
Grand Totals	35,278	29,035	1,813	32,367	26,568	1,705	- 8.3

¹ Includes abortion, assault against females or wife, indecent assault, carnal knowledge, incest, procuration, rape, attempted rape and seduction.

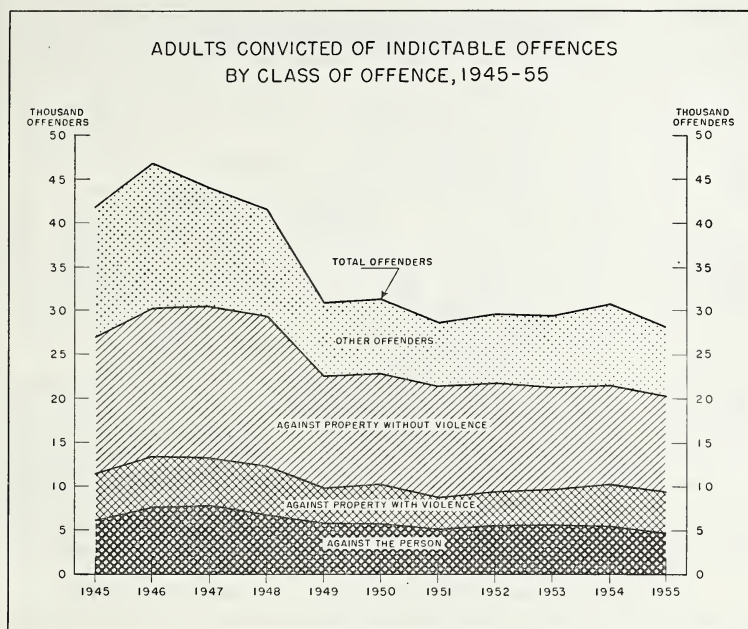


Table 3 shows that, in 1955, 56.9 p.c. of the persons convicted of indictable offences had not gone beyond elementary school grades in education, 40.4 p.c. were 24 years of age or younger, 11.2 p.c. were 45 years of age or over, and 74.5 p.c. lived in urban centres. Of these offenders 94.0 p.c. were males, 89.7 p.c. were born in Canada, 54.7 p.c. were unmarried, 23.5 p.c. were recorded as labourers and 7.5 p.c. had no remunerative employment. These percentages have changed very little in recent years.

3.—Persons Convicted of Indictable Offences classified by Occupation, Marital Status, Sex, Birthplace, etc., 1954 and 1955

Item	1954	1955	Item	1954	1955
	No.	No.		No.	No.
Total Convictions	30,848	28,273	TYPE OF OCCUPATION—concl.		
TYPE OF OCCUPATION			Service—concluded		
Agriculture.....	1,956	1,717	Public and protective.....	99	91
Armed Services.....	753	695	Student.....	549	680
Clerical.....	821	858	Other.....	58	107
Commercial and managerial.....	2,388	2,198	Transportation and communica-	3,000	2,804
Construction.....	2,484	2,531	tions.....		
Finance and insurance.....	86	76	Unemployed and retired (incl.	2,155	2,109
Fishing, trapping and logging.....	1,446	1,275	housewives).....	2,155	2,109
Labourer.....	7,959	6,647	Not given.....	1,443	1,202
Manufacturing and mechanical.....	3,062	2,953	MARITAL STATUS		
Mining.....	700	590	Single.....	16,717	15,459
Service—			Married.....	11,524	10,417
Domestic.....	707	618	Widowed.....	368	333
Personal.....	841	796	Divorced.....	182	202
Professional.....	341	326	Separated.....	733	818
			Not given.....	1,324	1,044

3.—Persons Convicted of Indictable Offences classified by Occupation, Marital Status, Sex, Birthplace, etc., 1954 and 1955—concluded

Item	1954	1955	Item	1954	1955
No.	No.	No.	No.	No.	No.
SEX			BIRTHPLACE		
Male.....	29,035	26,568	Canada.....	26,961	25,351
Female.....	1,813	1,705	British Isles and other Commonwealth.....	809	617
EDUCATIONAL STATUS			United States.....	338	302
Unable to read or write.....	744	497	Europe.....	1,104	1,013
Elementary.....	16,949	16,092	Asia.....	82	73
High School.....	8,717	8,390	Other foreign countries.....	8	5
Superior.....	578	532	Not given.....	1,546	912
Grade not stated.....	1,262	551			
Not given.....	2,598	2,211			
AGE			RESIDENCE		
16 to 19 years.....	5,547	5,557	Urban centres.....	22,657	21,073
20 to 24 years.....	6,660	5,879	Rural districts.....	7,353	6,584
25 to 44 years.....	14,125	12,880	Indeterminate.....	82	138
45 years or over.....	3,503	3,171	Not given.....	756	478
Not given.....	1,013	786			

Female Offenders.—There were 1,705 female offenders convicted of indictable offences in 1955, 39.1 p.c. of whom were in Ontario and 21.1 p.c. in Quebec. Of the total convicted in that year 43.1 p.c. were found guilty of theft and receiving stolen goods and 9.1 p.c. were committed for assault. Three women were convicted of manslaughter.

4.—Females Convicted of Indictable Offences by Province 1954 and 1955

Province or Territory	Females Convicted		Females Convicted to Total Convictions	
	1954	1955	1954	1955
	No.	No.	p.c.	p.c.
Newfoundland.....	35	42	5.4	6.9
Prince Edward Island.....	5	6	2.9	4.7
Nova Scotia.....	51	65	3.3	4.1
New Brunswick.....	26	25	3.5	3.3
Quebec.....	416	360	6.4	5.6
Ontario.....	695	666	5.6	6.1
Manitoba.....	172	167	9.9	10.7
Saskatchewan.....	46	46	3.9	4.3
Alberta.....	142	116	6.0	5.2
British Columbia.....	222	212	6.4	6.8
Yukon and Northwest Territories.....	3	—	5.3	—
Canada.....	1,813	1,705	5.9	6.0

Multiple Convictions.—Table 5 shows the number of persons having more than one conviction at a court appearance for the years 1951-55. Multiple convictions occur most often in cases of forgery and uttering, false pretences, theft, receiving stolen goods and burglary.

5.—Persons Convicted of More than One Offence at the Time of Trial compared with Persons Convicted of One Offence 1951-55

Item	1951	1952	1953	1954	1955
	No.	No.	No.	No.	No.
Persons Convicted of—					
2 offences.....	1,669	2,409	3,248	3,265	3,280
3 ".....	562	759	971	1,713	1,089
4 ".....	248	360	437	256	528
5 ".....	162	186	259	154	306
6 ".....	117	144	222	89	189
7 ".....	75	106	122	58	126
8 ".....	50	79	92	44	113
9 ".....	26	51	67	27	91
10 ".....	32	47	52	54	56
11 to 20 offences.....	84	139	179	194	200
21 offences or over.....	28	50	57	65	92
Totals, Convicted of More than One Offence.....	3,053	4,330	5,706	5,919	6,070
Totals, Convicted of One Offence.....	25,927	25,431	23,861	24,929	22,203
Grand Totals.....	28,980	29,761	29,567	30,848	28,273

Disposition of Cases and Recidivism.—Of all suspects before the courts for indictable crimes in 1955, 87.4 p.c. were adjudged guilty; the convictions against males (87.8 p.c.) constituted a higher percentage than those against females (81.0 p.c.) and varied considerably between provinces. Prince Edward Island showed the highest percentage (99.2 p.c.) of convictions and Nova Scotia the lowest (79.8 p.c.).

6.—Persons Charged and Convictions for Indictable Offences by Province 1954 and 1955

Province or Territory	1954			1955		
	Charges	Convictions		Charges	Convictions	
	No.	No.	p.c.	No.	No.	p.c.
Newfoundland.....	712	645	90.6	667	611	91.6
Prince Edward Island.....	171	171	100.0	130	129	99.2
Nova Scotia.....	1,915	1,526	79.7	1,967	1,570	79.8
New Brunswick.....	784	735	93.8	783	751	95.9
Quebec.....	7,302	6,525	89.4	7,248	6,391	88.2
Ontario.....	14,898	12,412	83.3	12,959	10,836	83.6
Manitoba.....	1,838	1,739	94.6	1,636	1,558	95.2
Saskatchewan.....	1,248	1,184	94.9	1,134	1,072	94.5
Alberta.....	2,487	2,383	95.8	2,385	2,251	94.4
British Columbia.....	3,866	3,471	89.8	3,456	3,102	89.8
Yukon and Northwest Territories.....	57	57	100.0	2	2	100.0
Canada.....	35,278	30,848	87.4	32,367	28,273	87.4

In 1955, 45.6 p.c. of the convicted persons had no previous conviction, 8.8 p.c. had previously been found guilty of one offence and 19.0 p.c. had two or more earlier convictions. Court records for the other 26.6 p.c. were not obtained.

7.—Persons Charged with Indictable Offences and Disposition of Cases and Recidivism, 1954 and 1955

Item	1954	1955	Item	1954	1955
	No.	No.		No.	No.
Charges.....	35,278	32,367	Convictions of males.....	29,035	26,568
Acquittals.....	4,216	3,936	Convictions of females.....	1,813	1,705
Disagreement of jury.....	4	9	First convictions.....	13,082	12,894
Stay of proceedings.....	141	97	Second convictions.....	2,477	2,482
No bill and <i>nolle prosequi</i>	17	9	Reiterated convictions.....	5,639	5,369
Detention because of insanity.....	52	43	Not given.....	9,650	7,528

Sentences.—In 1955, 32.9 p.c. of the persons convicted of indictable crimes were fined, 33.4 p.c. were sent to gaol without option of fine, 6.0 p.c. were committed to reformatories and 7.4 p.c. to penitentiaries, and 20.3 p.c. were given suspended sentences or put on probation. Eight habitual criminals were given preventive detention, four persons received life sentences and 16 were given the death penalty. The proportions in 1955 were much the same as in recent preceding years.

8.—Sentences given for Indictable Offences by Province 1954 and 1955

Sentence	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1954												
Option of fine.....	306	106	646	239	2,228	4,047	490	391	839	1,266	13	10,571
Gaol—												
Under one year.....	193	32	350	250	2,221	3,245	490	483	770	1,032	29	9,095
One year or over.....	4	2	21	19	318	574	140	155	254	228	4	1,719
Reformatory.....	1	—	2	6	92	1,217	41	—	21	104	—	1,484
Penitentiary—												
Two years and under five..	30	9	144	71	698	496	84	52	192	240	2	2,018
Five years or over.....	2	—	11	2	141	89	13	7	12	47	—	324
Life.....	—	—	—	—	11	1	1	—	—	—	—	13
Death.....	—	—	—	1	3	6	—	—	2	2	1	15
Suspended sentence or other disposition.....	109	22	352	147	813	2,737	480	96	293	552	8	5,609
Totals, 1954.....	645	171	1,526	735	6,525	12,412	1,739	1,184	2,383	3,471	57	30,848
1955												
Option of fine.....	248	67	638	325	2,276	3,297	433	389	770	868	1	9,312
Gaol—												
Under one year.....	211	36	379	206	2,220	2,500	405	394	746	940	1	8,038
One year or over.....	10	3	22	13	248	446	113	91	206	244	—	1,396
Reformatory.....	3	1	9	1	78	1,366	34	—	18	179	—	1,689
Penitentiary—												
Two years and under five..	25	6	128	58	542	492	92	47	169	216	—	1,775
Five years or over.....	5	2	12	6	82	84	18	—	23	73	—	305
Life.....	—	—	—	—	2	—	—	—	1	1	—	4
Death.....	—	—	—	1	1	3	5	—	1	5	—	16
Suspended sentence or other disposition.....	109	14	382	141	942	2,648	458	151	317	576	—	5,738
Totals, 1955.....	611	129	1,570	751	6,391	10,836	1,558	1,072	2,251	3,102	2	28,273

9.—Method of Trial of Persons Charged with Indictable Crimes, showing Disposition of Cases by Sex and by Province 1954 and 1955—concluded

Method of Trial	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
By Summary Trial—												
Convicted.....	M. 562	115	1,409	703	5,686	9,638	1,322	980	1,993	2,686	2	25,096
	F. 42	6	65	22	338	647	166	42	109	205	—	1,642
Acquitted.....	M. 46	—	322	17	659	1,643	31	37	79	233	—	3,067
	F. 4	—	45	1	57	195	9	6	8	19	—	344
Detained because of insanity.....	M. —	—	4	1	11	9	—	—	2	—	—	27
	F. —	—	2	—	2	3	—	—	—	—	—	7
Stay of Proceedings... No Bill and <i>Nolle Prosequi</i>	M. —	—	—	—	34	—	7	1	—	21	—	63
	F. —	—	—	—	3	—	1	—	—	9	—	13
Totals, Persons Charged.	667	130	1,967	783	7,248	12,959	1,636	1,134	2,385	3,456	2	32,367
Totals, Persons Convicted, 1955.....	611	129	1,570	751	6,391	10,836	1,558	1,072	2,251	3,102	2	28,273

10.—Persons Charged and Convicted of Indictable Crimes according to Trial Court by Province 1954 and 1955

Province or Territory	1954					1955				
	Persons Charged and Convicted by—					Persons Charged and Convicted by—				
	Police Magistrate or Recorder's Court	Juvenile or Family Court	County Court	Higher Court	Totals	Police Magistrate or Recorder's Court	Juvenile or Family Court	County Court	Higher Court	Totals
Newfoundland—	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Charged.....	684	18	—	10	712	618	36	—	13	667
Convicted.....	623	17	—	5	645	568	36	—	7	611
Prince Edward Island—										
Charged.....	162	—	7	2	171	121	—	7	2	130
Convicted.....	162	—	7	2	171	121	—	7	1	129
Nova Scotia—										
Charged.....	1,823	3	48	41	1,915	1,847	—	66	54	1,967
Convicted.....	1,453	2	47	24	1,526	1,474	—	63	33	1,570
New Brunswick—										
Charged.....	755	1	27	1	784	742	2	22	17	783
Convicted.....	716	1	18	—	735	723	2	15	11	751
Quebec—										
Charged.....	6,061	473	595	173	7,302	6,236	554	273	185	7,248
Convicted.....	5,481	471	444	129	6,525	5,482	542	239	128	6,391
Ontario—										
Charged.....	14,116	34	534	214	14,898	12,082	53	528	296	12,959
Convicted.....	11,868	32	367	145	12,412	10,234	51	376	175	10,836
Manitoba—										
Charged.....	1,637	99	63	39	1,838	1,433	103	49	51	1,636
Convicted.....	1,570	98	44	27	1,739	1,385	103	30	40	1,558
Saskatchewan—										
Charged.....	1,141	1	48	37	1,248 ¹	1,066	—	31	37	1,134
Convicted.....	1,097	1	37	29	1,184 ¹	1,022	—	25	25	1,072
Alberta—										
Charged.....	2,283	8	42	154	2,487	2,191	—	35	159	2,385
Convicted.....	2,218	8	35	122	2,383	2,102	—	33	116	2,251
British Columbia—										
Charged.....	3,289	237	215	125	3,866	2,878	295	133	150	3,456
Convicted.....	2,988	236	179	68	3,471	2,610	281	99	112	3,102
Yukon and Northwest Territories—										
Charged.....	56	—	—	1	57	2	—	—	—	2
Convicted.....	56	—	—	1	57	2	—	—	—	2
Canada—										
Charged.....	32,007	874	1,579	797	35,278¹	29,216	1,043	1,144	964	32,367
Convicted.....	28,232	866	1,178	552	30,848¹	25,723	1,015	887	648	28,273

¹ Includes 21 charged and 20 convicted by justices of the peace.

Subsection 2.—Young Adult Offenders (16-24 Years)

Young men and women from 16 to 24 years of age each year form about 43.0 p.c. of the criminal population who commit indictable offences but they comprise less than 19.5 p.c. of the total population 16 years of age or over. As this age group includes some of the most daring offenders who may be already experienced criminals as well as first offenders likely to be turned from crime by further education and training, it seems worth while to give consideration to offenders in this group as distinct from offenders in the older age groups.

Of the young offenders in 1955, 70.7 p.c. were tried in three provinces—Ontario 37.9 p.c., Quebec 22.4 p.c., and British Columbia 10.4 p.c.; 48.6 p.c. of them were still under 20 years of age.

11.—Young Adult Offenders by Age Group, Sex and Province 1954 and 1955

Age Group and Sex	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1954												
16 - 17 years.....M.	60	10	120	53	659	905	101	111	207	381	—	2,607
F.	—	—	6	4	44	52	23	3	15	15	—	162
18 - 19 ".....M.	44	11	150	69	506	1,075	148	152	232	251	6	2,644
F.	6	—	6	2	15	51	15	7	18	14	—	134
20 - 24 ".....M.	137	36	352	144	1,301	2,431	344	289	547	685	13	6,279
F.	6	3	8	6	100	138	37	6	35	41	1	381
Totals, 1954.....	253	60	642	278	2,625	4,652	668	568	1,054	1,387	20	12,207
1955												
16 - 17 years.....M.	53	16	130	55	629	966	98	106	173	348	—	2,574
F.	4	1	8	4	36	56	32	7	9	12	—	169
18 - 19 ".....M.	45	14	154	77	511	1,079	140	142	235	262	—	2,659
F.	3	1	8	1	20	73	14	5	14	16	—	155
20 - 24 ".....M.	154	21	368	141	1,294	2,045	297	256	472	527	1	5,576
F.	9	1	6	3	77	119	31	8	22	27	—	303
Totals, 1955.....	268	54	674	281	2,567	4,338	612	524	925	1,192	1	11,436

In 1955, 12 of the 40 men found guilty of manslaughter and 24 of the 47 convicted of rape were under 25 years of age; 62.2 p.c. of the men found guilty of burglary and robbery were in that group as well as 46.6 p.c. of those convicted of offences against property without violence, which includes all thefts, 47.6 p.c. of those who maliciously damaged property, 40.5 p.c. of those found carrying offensive weapons and 57.5 p.c. of the prison escapees.

There were 1,705 women offenders in 1955, 627 of them under 25 years of age; nearly half (310) of the young offenders were guilty of theft and receiving stolen goods. Of the 100 women convicted under the Opium and Narcotic Drug Act, 30 were in the young adult group as were 33 of the 65 found guilty of forgery and uttering; 17 of the 22 female prison escapees were also young women.

12.—Young Adult Offenders Convicted of Indictable Offences, by Class of Offence and Sex 1954 and 1955

Class and Offence	1954		1955	
	Male	Female	Male	Female
	No.	No.	No.	No.
Class I.—Offences against the Person	1,686	65	1,541	46
Abduction.....	10	—	4	1
Assault, common and aggravated.....	827	35	723	13
Offences against females ¹	224	3	222	3
Manslaughter and murder.....	27	2	20	—
Attempted murder; shooting and wounding.....	68	1	38	3
Non-support, desertion and cruelty to children.....	17	4	5	—
Other offences against the person.....	513	20	529	26
Class II.—Offences against Property with Violence	2,895	47	2,824	34
Burglary and robbery.....	2,895	47	2,824	34
Class III.—Offences against Property without Violence	4,843	363	4,625	363
Fraud, embezzlement and false pretences.....	363	38	324	53
Receiving stolen goods.....	381	13	315	19
Theft.....	4,099	312	3,986	291
Class IV.—Malicious Offences against Property	180	5	221	11
Arson.....	27	3	22	3
Malicious damage to property.....	153	2	199	8
Class V.—Forgery and Other Offences against the Currency	225	31	246	33
Offences against currency.....	1	—	—	—
Forgery and uttering forged documents.....	224	31	246	33
Class VI.—Other Offences	1,701	166	1,352	140
Carrying unlawful weapons.....	118	1	83	1
Dangerous or reckless driving.....	263	3	85	—
Driving car while ability impaired.....	446	2	476	3
Driving car while drunk.....	144	—	99	—
Offences against public morals.....	20	31	37	33
Opium and Narcotic Drug Act, offences against.....	32	17	35	30
Gambling and lotteries.....	10	3	18	—
Keeping bawdy houses and inmates.....	5	66	10	40
Riots and unlawful assembly.....	177	—	37	—
Various.....	486	43	472	33
Grand Totals	11,530	677	10,809	627

¹ Includes abortion, assault against females, assault against wife, indecent assault, carnal knowledge, incest, procuration, rape, attempted rape, seduction and wife desertion.

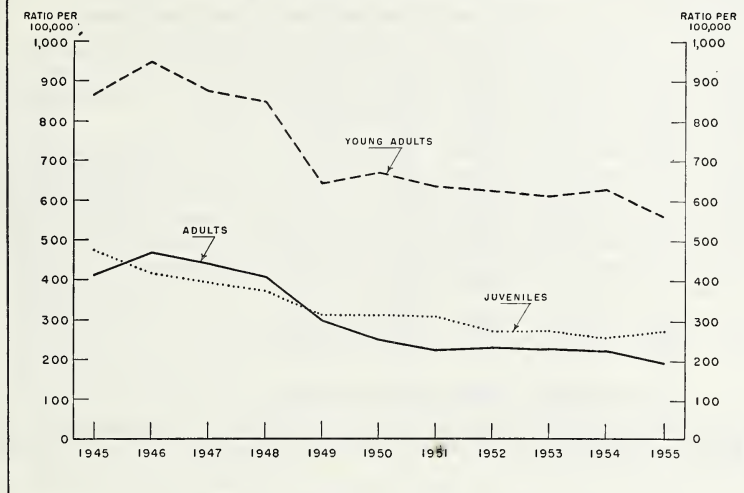
Table 13 shows the proportions of young offenders per 100,000 population in three age groups.

13.—Numbers per 100,000 Population of Young Adults Convicted of Indictable Offences by Age Group 1954 and 1955

Age Group	1954			1955		
	Offenders	Per 100,000 Population in Respective Group	Change from Preceding Year	Offenders	Per 100,000 Population in Respective Group	Change from Preceding Year
	No.		p.c.	No.		p.c.
16 - 17 years.....	2,769	622	+3.1	2,743	602	-0.9
18 - 19 ".....	2,778	637	+5.7	2,814	636	+1.3
20 - 24 ".....	6,660	598	+2.2	5,879	524	-11.7

OFFENDERS CONVICTED OF INDICTABLE OFFENCES, 1945-55

(RATIO PER 100,000 POPULATION OF RESPECTIVE AGE GROUP)



The sentences meted out to these young people vary somewhat from those given to offenders over 24 years of age. Usually a higher proportion of them are given suspended sentences, put on probation or sent to reformatories and a lower proportion fined or given gaol sentences.

14.—Disposition of Sentences for Indictable Offences by Sex 1954 and 1955

Disposition of Sentences	1954				1955			
	16-24 Years		25 Years or Over		16-24 Years		25 Years or Over	
	M.	F.	M.	F.	M.	F.	M.	F.
	No.	No.	No.	No.	No.	No.	No.	No.
Suspended sentence.....	1,389	143	1,435	210	1,521	136	1,428	186
Probation.....	1,408	143	731	144	1,529	169	649	120
Fine.....	2,865	140	7,118	448	2,530	99	6,285	398
Gaol.....	4,065	176	6,297	276	3,406	157	5,563	308
Reformatory.....	890	66	495	33	1,032	58	568	31
Penitentiary.....	909	9	1,418	25	783	8	1,259	34
Death.....	4	—	11	—	8	—	7	1

Through the system of suspended sentence and probation supervising, many young offenders receive another chance to make good and reformatory training gives others an opportunity to better their employment possibilities. It is interesting to note that 29.8 p.c. of the young male offenders in 1955 were recorded as labourers, indicating that they had no particular skill by which to earn a living; the proportion of male offenders 25 years or

over recorded as labourers was 22.4 p.c. Those recorded as students made up 5.9 p.c. of the youths and 8.0 p.c. were reported as unemployed as compared with 3.0 p.c. of the older men. Approximately two of every three lived in urban centres.

Subsection 3.—Convictions for Summary Conviction Offences

Offences punishable on summary conviction—those not expressly made indictable—include all offences against provincial statutes and municipal by-laws. Summary conviction offences are triable by magistrate or justice of the peace under Part XXIV of the Criminal Code or under the provincial summary convictions Acts.

It is debatable how far summary conviction offences are of a criminal nature and whether their increase indicates an increase in crime. Many are breaches of municipal by-laws and contrary to public safety, health and comfort as, for example, parking violations or practising trades without licence, but they do not involve violence, cruelty or serious dishonesty. On the other hand, offences as serious as cruelty to animals and contributing to juvenile delinquency are included under this classification and such indictable offences as common assault and driving with ability impaired may be tried on summary conviction.

Summary convictions increased by 8.6 p.c. to 2,147,776 in 1955 from 1,977,567 in 1954. Increases were general in all provinces except Manitoba.

15.—Convictions for Summary Conviction Offences by Province 1946-55

NOTE.—Figures for years before 1951 are for the 12 months ended Sept. 30, 1951; those for 1952-55 are for the calendar year. Statistics for the intervening months, October-December 1950, are given in DBS report, *Statistics of Criminal and Other Offences*. Figures for 1900-45 are given in the corresponding table of previous Year Books beginning with the 1933 edition.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1946.....	...	2,715	12,915	13,925	176,996	354,154	36,014	13,985	16,289	32,203	234	242	659,672
1947.....	...	2,806	12,019	14,097	188,835	407,334	47,170	15,263	18,696	45,585	328	325	752,458
1948.....	...	2,696	13,699	12,189	228,502	445,911	52,783	15,488	19,748	85,006	385	238	876,645
1949.....	..	3,118	12,617	13,131	232,132	510,837	72,023	16,465	25,551	94,326	232	57	980,489
1950.....	..	2,095	13,137	21,732	280,868	617,565	79,079	22,717	28,344	117,729	553	172	1,183,991
1951.....	5,022	2,195	14,850	25,660	267,648	671,893	118,217	22,467	39,956	139,304	950	304	1,308,466
1952.....	6,191	2,578	14,977	31,905	312,892	819,253	135,034	31,618	50,443	158,967	1,342	507	1,565,707
1953.....	6,315	2,529	17,292	33,308	352,009	960,764	135,757	34,764	57,463	161,382	1,432	607	1,763,622
1954.....	7,027	2,958	18,096	35,003	441,875	1,066,039	141,290	46,343	56,408	160,707	1,339	482	1,977,567
1955.....	8,585	3,534	19,459	38,560	444,143	1,224,654	110,632	46,817	58,757	192,589	..	46	2,147,776

In considering statistics of summary convictions it should be remembered that such convictions are greatly influenced by the customs of the people and by the application and degree of enforcement of municipal regulations. These differ from place to place and from year to year and affect summary conviction offences more than they do indictable offences.

In 1955 increases appeared in convictions for breaches of municipal by-laws, the Lord's Day Act, the Indian Act and traffic regulations, and for frequenting bawdy houses, common assault, contributing to delinquency and non-support and neglect of children. Decreases were shown for offences against the Railway Act and the Liquor Control Act and for vagrancy, damage to property, disturbing the peace and gambling.

16.—Convictions for Summary Conviction Offences by Type 1951-55

NOTE.—See headnote to Table 15, p. 320.

Type of Offence	1951	1952	1953	1954	1955	Increase or Decrease 1954-55
	No.	No.	No.	No.	No.	p.c.
Assault (common).....	4,046	4,546	4,645	4,414	5,048	+14.4
Disturbing the peace.....	12,210	12,760	13,203	13,512	12,222	- 9.6
Drunkenness.....	83,898	85,682	91,182	94,923	93,177	- 1.8
Vagrancy.....	6,893	6,956	8,377	8,646	7,146	-17.4
Damage to property.....	1,678	2,143	2,406	2,467	2,674	-16.1
Gambling.....	3,613	2,656	2,759	2,552	2,398	- 6.0
Bawdy houses (frequented).....	273	434	390	468	606	+29.5
Non-support and neglecting children.....	4,609	5,178	5,764	5,934	6,116	+ 3.1
Contributing to delinquency.....	932	1,349	1,720	1,341	1,525	+13.7
Traffic regulations.....	1,065,426	1,311,022	1,505,931	1,685,811	1,837,814	+ 9.0
Provincial and Federal Acts—						
Game and Fishing Acts.....	5,996	5,839	6,397	6,554	6,535	- 0.3
Indian Act.....	2,213	2,549	3,117	2,447	3,287	+34.3
Liquor Control and Temperance Acts.....	28,405	33,335	34,972	36,741	36,391	- 1.0
Lord's Day Act.....	749	666	625	567	641	+13.1
Radio without a licence.....	12,418	11,273	...	...	...	...
Railway Acts.....	1,266	1,427	2,093	2,145	1,451	-32.4
Revenue Laws ¹	5,292	6,259	6,629	9,030	9,005	- 0.3
Other provincial and federal Acts.....	18,980	17,989	24,082	24,756	25,673	+ 3.7
Municipal by-laws, breaches of.....	40,621	44,258	39,415	64,024	87,766	+37.1
Exercising various callings without licence.....	2,349	2,433	2,249	2,341	2,169	- 7.4
Other offences.....	6,599	6,953	7,666	8,894	6,132	-31.1
Totals, Convictions.....	1,308,466	1,565,707	1,763,622	1,977,567	2,147,776	+ 8.6

¹ Includes Excise and Income Tax Acts.

17.—Convictions for Breaches of Traffic Regulations by Province 1946-55

NOTE.—See headnote to Table 15, p. 320.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1946.....	...	327	1,707	2,014	123,915	271,379	26,266	5,253	5,574	17,193	2	453,630
1947.....	...	556	2,370	2,667	138,321	315,412	36,526	6,141	7,476	28,043	7	537,519
1948.....	...	393	4,607	2,469	174,021	352,253	41,074	6,300	7,984	60,493	5	649,599
1949.....	...	519	4,084	3,729	188,003	417,016	60,127	7,274	11,112	69,545	58	761,467
1950.....	...	366	4,265	11,909	227,857	508,010	67,832	12,362	13,772	92,038	138	938,549
1951.....	1,773	580	5,802	15,641	215,222	570,895	106,262	13,325	22,923	112,738	265	1,065,426
1952.....	2,565	765	5,109	20,358	266,835	714,810	122,647	19,749	25,693	132,123	368	1,311,022
1953.....	2,719	760	6,014	21,296	309,064	857,117	122,370	21,957	30,846	133,295	493	1,505,931
1954.....	3,048	1,214	7,040	21,804	390,701	954,749	125,346	32,666	28,690	120,281	272	1,685,811
1955.....	3,977	1,637	7,982	28,080	390,502	1,102,183	92,514	32,667	29,463	148,809	..	1,837,814

For the year 1955, Ontario, with 41.0 p.c. of the registrations of motor vehicles in Canada, had 60.0 p.c. of the total convictions for breaches of traffic regulations; Quebec in the same year had 18.8 p.c. of the registered vehicles and 21.2 p.c. of the convictions. In interpreting the figures in this way, however, it should be pointed out that traffic regulations are by no means uniform throughout Canada and no account is taken of the differences in the degrees of urbanization in the provinces. These two provinces have large urban centres but in provinces with lower degrees of urbanization, such as the Atlantic Provinces, Saskatchewan and Alberta, convictions are lower when considered in proportion to the number of motor vehicles registered.

Convictions for Drunkenness and Offences against the Liquor Acts.—In considering these convictions it should be noted that the same person may and often does appear before the courts on such charges more than once within a year and that the number of convictions may thus be well above the number of persons convicted.

18.—Convictions for Drunkenness by Province 1946-55

NOTE.—See headnote to Table 15, p. 320.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1946.....	...	1,478	4,754	7,754	7,167	29,698	2,685	1,847	2,596	5,974	85	38	64,076
1947.....	...	1,187	4,907	6,584	11,006	31,218	2,510	1,802	2,632	8,801	184	37	70,868
1948.....	...	969	4,151	4,900	11,015	33,446	2,829	1,392	2,580	9,135	101	24	70,542
1949.....	..	1,089	4,363	5,125	10,419	33,797	3,613	1,497	4,656	11,237	126	9	75,931
1950.....	..	907	3,931	4,980	10,942	35,356	2,984	1,503	3,849	11,180	240	63	75,935
1951.....	844	759	4,432	6,036	10,222	38,577	3,098	1,915	4,691	13,007	213	104	83,898
1952.....	786	1,049	5,457	6,550	10,702	36,344	3,272	2,264	5,141	13,479	462	176	85,682
1953.....	1,045	1,007	6,378	6,712	9,103	38,108	3,729	2,728	7,753	13,987	403	229	91,182
1954.....	866	966	5,941	6,957	10,663	38,461	3,892	2,670	7,039	16,637	637	194	94,923
1955.....	1,015	1,033	6,527	6,067	9,786	39,465	3,616	3,147	6,275	16,214	..	32	93,177

There is general interest in the relation of alcoholism to crime but, when examining statistics to support the assumption that some crimes are associated with the consumption of liquor, it should be observed that accurate interpretation would necessitate allowance for population variables such as age and sex distribution and other classifications according to social and economic status, etc.

19.—Convictions for Offences against the Liquor Acts by Province 1946-55

NOTE.—See headnote to Table 15, p. 320.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1946.....	...	374	3,436	1,411	2,274	15,779	2,059	2,697	2,514	2,615	57	146	33,362
1947.....	...	354	2,503	1,742	1,494	12,889	2,229	2,712	2,623	1,741	46	153	28,486
1948.....	...	329	2,274	1,274	1,519	13,891	1,921	2,311	2,670	1,443	39	73	27,744
1949.....	..	439	2,053	1,278	1,969	14,339	1,574	2,418	3,081	1,098	—	10	28,259
1950.....	..	268	2,192	1,172	3,121	15,761	1,980	2,478	3,504	1,164	64	34	31,738
1951.....	371	266	2,273	818	1,467	14,104	1,961	2,005	3,757	1,251	88	44	28,405
1952.....	475	284	2,236	1,172	777	15,050	2,314	2,527	6,782	1,381	243	94	33,335
1953.....	441	280	2,124	1,221	1,304	17,137	2,013	3,146	5,445	1,508	285	68	34,972
1954.....	411	368	2,285	979	1,203	18,351	2,501	3,484	5,313	1,557	251	38	36,741
1955.....	571	464	2,056	1,014	1,322	18,256	2,102	3,480	5,579	1,545	..	2	36,391

Convictions of Females.—The number of convictions against females for summary conviction offences was higher in 1955 than in 1954 by 12.2 p.c., an increase more than accounted for by a 22.0 p.c. advance in Ontario. New Brunswick, British Columbia, Nova Scotia, Quebec and Alberta recorded percentage decreases of 25.1, 19.6, 6.6, 4.8 and 1.5 respectively. Traffic offences were the cause of 82.1 p.c. of all summary convictions against women, in 1955 such convictions increased by 14.6 p.c. as compared with 1954.

20.—Convictions of Females for Summary Conviction Offences by Province 1951-55

NOTE.—See headnote to Table 15, p. 320.

Province or Territory	Numbers of Convictions					Percentages of Convictions of Females to Total Convictions				
	1951	1952	1953	1954	1955	1951	1952	1953	1954	1955
Newfoundland.....	206	309	328	241	550	4.1	5.0	5.2	3.4	6.4
Prince Edward Island....	40	57	47	46	46	1.8	2.2	1.9	1.6	1.3
Nova Scotia.....	471	685	602	469	438	3.2	4.6	3.5	2.6	2.3
New Brunswick.....	501	611	455	586	439	2.0	1.9	1.4	1.7	1.2
Quebec.....	9,056	7,156	9,168	9,024	8,590	3.4	2.3	2.6	2.0	1.9
Ontario.....	57,135	69,057	53,987	63,384	77,321	8.5	8.4	5.6	5.9	6.3
Manitoba.....	1,745	6,244	3,838	4,309	4,853	1.5	4.6	2.8	3.0	4.4
Saskatchewan.....	592	570	617	641	847	2.6	1.8	1.8	1.4	1.8
Alberta.....	1,208	1,568	1,812	1,628	1,604	3.0	3.1	3.2	2.9	2.7
British Columbia.....	13,596	15,109	13,714	13,864	11,149	9.8	9.5	8.5	8.6	5.8
Yukon and N.W.T.....	51	136	148	186	9	4.1	7.4	7.3	10.2	19.6
Canada.....	84,601	101,502	84,716	94,378	105,846	6.5	6.5	4.8	4.8	4.9

Subsection 4.—Appeals

The disposition of appeals dealt with by the Supreme Court of Canada and the provincial supreme courts in criminal cases is shown by province for 1954 and 1955 in Table 21; the disposition of those dealt with by county and district courts against summary convictions is given in Table 22.

21.—Appeals in Indictable Cases by Province 1954 and 1955

Year and Province or Court	Appeals Disposed of by Courts	Crown Appeal					Appeal of Accused					
		From Acquittal			From Sentence		From Conviction				From Sentence	
		Dis-missed	New Trial	Con-viction	Dis-missed	Varied	Dis-missed	Ac-quitted	New Trial	Substi-tuted Ver-dict	Dis-missed	Varied
1954	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland.....	—	—	—	—	—	—	—	—	—	—	—	—
P. E. Island.....	4	—	—	—	4	—	—	—	—	—	—	—
Nova Scotia.....	7	—	—	—	—	—	4	1	1	1	—	—
New Brunswick....	6	—	—	—	—	—	3	1	1	1	—	—
Quebec.....	67	4	—	—	—	1	30	18	1	—	10	3
Ontario.....	339	—	—	1	5	—	158	29	14	6	91	35
Manitoba.....	70	6	—	—	1	—	35	7	—	—	17	4
Saskatchewan.....	27	1	—	—	1	—	5	1	—	1	3	15
Alberta.....	208	4	—	1	3	—	48	5	8	—	66	73
British Columbia..	240	9	—	1	2	9	73	20	16	1	58	51
Supreme Court of Canada.....	8	2	—	1	—	—	3	1	1	—	—	—
Totals, 1954.....	976	26	—	4	16	10	359	83	42	10	245	181
1955												
Newfoundland.....	3	—	—	—	—	—	—	—	—	—	1	2
P. E. Island.....	—	—	—	—	—	—	—	—	—	—	—	—
Nova Scotia.....	13	—	—	—	—	—	6	1	1	1	3	1
New Brunswick....	19	—	—	1	—	6	1	1	1	—	3	6
Quebec.....	75	3	1	—	—	—	35	22	3	—	1	10
Ontario.....	344	2	—	—	—	1	129	57	15	—	111	29
Manitoba.....	193	—	—	—	—	2	19	—	2	4	148	18
Saskatchewan.....	58	1	—	—	2	1	8	4	2	—	31	9
Alberta.....	211	3	2	4	1	2	36	14	13	3	82	51
British Columbia..	277	8	—	1	2	5	94	12	14	—	102	39
Supreme Court of Canada.....	14	—	—	5	—	—	4	3	2	—	—	—
Totals, 1955.....	1,207	17	3	11	5	17	332	114	53	8	482	165

22.—Appeals in Summary Conviction Cases by Province 1954 and 1955

Year and Province or Court	Appeals Disposed of by Courts	Appeal of Informant				Appeal of Accused				
		From Acquittal		From Sentence		From Conviction			From Sentence	
		Dis-missed	Con-viction	Dis-missed	Varied	Dis-missed	Ac-quitted	Substi-tuted Verdict	Dis-missed	Varied
1954	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland.....	2	—	—	—	—	2	—	—	—	—
P. E. Island.....	14	—	—	—	—	9	5	—	—	—
Nova Scotia.....	65	11	8	1	2	21	17	5	—	—
New Brunswick.....	27	—	3	—	—	16	3	3	—	2
Quebec.....	68	15	1	—	1	36	5	8	1	1
Ontario.....	333	9	24	1	1	141	92	27	24	14
Manitoba.....	9	—	—	—	—	7	2	—	—	—
Saskatchewan.....	32	1	1	1	—	15	5	8	—	1
Alberta.....	143	4	2	—	1	62	58	1	3	12
British Columbia.....	122	4	4	3	3	60	35	5	5	3
Totals, 1954.....	815	44	43	6	8	369	222	57	33	33
1955	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland.....	3	—	—	—	—	—	—	—	2	1
P. E. Island.....	—	—	—	—	—	—	—	—	—	—
Nova Scotia.....	119	3	64	—	—	26	17	6	2	1
New Brunswick.....	14	2	—	—	—	4	3	2	2	1
Quebec.....	57	2	1	—	1	32	17	—	3	1
Ontario.....	329	7	13	3	4	153	94	30	13	12
Manitoba.....	18	—	6	—	—	10	2	—	—	—
Saskatchewan.....	38	2	1	1	1	13	12	2	2	4
Alberta.....	234	6	6	4	1	85	50	2	60	20
British Columbia.....	156	9	7	1	1	76	53	6	1	2
Totals, 1955.....	968	31	98	9	8	399	248	48	85	42

Section 3.—Juvenile Delinquents

The Juvenile Delinquents Act defines a child as "any boy or girl apparently or actually under the age of 16 years". Provision is made, however, by which the Governor General in Council may proclaim that in a province the definition of a child be a "person under the age of 18 years". This has been done in British Columbia, Manitoba and Quebec. Newfoundland considers a juvenile to be a girl or a boy of under 17 years of age. For uniformity the figures relating to juveniles compiled by the Dominion Bureau of Statistics refer to the younger ages of under 16 years only and deal primarily with cases disposed of by the courts.

The fact that juvenile court statistics furnish the most comprehensive figures collected on a countrywide basis makes it important that their possibilities and limitations be understood. This Section gives an account of juvenile delinquency in Canada from the viewpoint of legal action taken, for in the eyes of the law a *child is a delinquent only when he or she is adjudged before the court to have committed a delinquency*. To many people the term 'juvenile delinquent' has a broader interpretation but that adopted in this Section does not include those boys and girls whose misdemeanours have not been reported to the courts nor those given the necessary advice and aid from their parents, their school, the police or a child care agency. Moreover it does not include those cases that are handled unofficially by the court, where the judge or probation officer makes an adjustment without filing a legal record of the offence. The tendency to follow this practice and thus keep children's names from court records is growing and may account to some extent for the decreasing number of recorded court cases.

These statistics represent cases of delinquency reported to the courts, from the most trivial infractions to the most serious, that of murder. The number of cases brought before the courts is influenced by such factors as personnel and facilities of the court, community

interest in and understanding of the function of a juvenile court, and by variations in the policies of the courts in the disposition of cases. As more courts are established the additional returns may exaggerate an apparent increase in delinquency or may underestimate a decrease. In some communities the juvenile court is the only available agency to provide services to children; in others there are well established agencies serving children of which the juvenile court is only one.

It should be noted, too, that the total figures do not represent the actual number of children charged and found guilty but rather tend to exaggerate them, for a child referred to the court two or more times during the year for different offences is counted as a different case each time. Neither do the figures represent the number of offences committed by offenders, as when a child is charged with more than one delinquency at a hearing only the most serious offence is counted.

Reports of juvenile delinquents were received in 1955 from 157 of the 169 judicial districts. Twelve of these had no cases to report. Separate reports were received in 1955 from 159 incorporated urban centres of 4,000 population or more.

Juveniles Before the Courts.—The number of cases of juveniles brought before the courts in 1955 was 8,187, an increase of 5.6 p.c. over 1954. Newfoundland and Alberta showed the greatest percentage increases among the provinces.

23.—Juveniles brought before the Courts by Province 1951-55

Province or Territory	1951	1952	1953	1954	1955	Percentage Change, 1954-55
	No.	No.	No.	No.	No.	
Newfoundland.....	194	223	207	229	269	+17.5
Prince Edward Island.....	55	29	37	43	31	-27.9
Nova Scotia.....	554	425	594	650	576	-11.4
New Brunswick.....	275	274	247	235	210	-10.6
Quebec.....	1,348	965	1,306	1,229	1,323	+7.6
Ontario.....	3,441	3,370	3,531	3,381	3,605	+6.6
Manitoba.....	404	454	405	422	455	+7.8
Saskatchewan.....	71	84	54	62	58	-6.5
Alberta.....	285	363	421	463	602	+30.0
British Columbia.....	893	1,021	1,023	1,037	1,058	+2.0
Yukon Territory.....	1	—	4	—	—	—
Northwest Territories.....	—	—	—	—	—	—
Canada.....	7,521	7,213	7,829	7,751	8,187	+5.6

24.—Percentage Change in the Number of Boys and Girls brought before the Courts 1946-55

Year	Percentage Change from Preceding Year			Percentage Change from 1945		
	Boys' Cases	Girls' Cases	All Cases	Boys' Cases	Girls' Cases	All Cases
1946.....	-11.4	-5.8	-10.8	-11.4	-5.8	-10.8
1947.....	-3.3	-17.3	-5.1	-14.4	-22.0	-15.3
1948.....	-5.1	-1.3	-4.7	-18.7	-23.1	-19.3
1949.....	-9.0	-24.0	-10.7	-26.0	-41.6	-27.9
1950.....	+2.9	+11.8	+3.8	-23.8	-34.7	-25.1
1951 ¹	+3.9	-5.3	+3.0	-20.9	-38.1	-22.9
1952.....	-5.0	+4.5	-4.1	-24.8	-35.4	-26.1
1953.....	+8.3	+11.0	+8.5	-18.6	-28.3	-19.8
1954.....	-0.6	-4.2	-1.0	-19.1	-31.3	-20.6
1955.....	+3.3	+25.9	+5.6	-16.4	-13.5	-16.1

¹ Newfoundland included from 1951.

Children Adjudged Delinquent.—Over a period of ten years it has been found that between 80 and 90 p.c. of the children brought before the courts each year have been adjudged delinquent. The number of delinquents in 1955 was 7,025, an increase of 10.9 p.c. over 1954. The major increases in 1955 were shown in Quebec and Alberta.

25.—Juvenile Delinquents by Province 1946-55

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1946.....	...	55	384	382	2,155	3,104	298	195	405	878	—	7,856
1947.....	...	30	412	334	1,842	2,830	424	212	277	1,167	17	7,545
1948.....	...	28	421	263	1,864	2,799	364	169	237	999	11	7,155
1949.....	..	49	433	198	1,323	2,541	403	171	246	833	1	6,198
1950.....	..	10	351	258	1,369	3,056	400	76	204	688	6	6,418
1951.....	175	52	483	261	1,180	3,024	347	64	242	815	1	6,644
1952.....	215	29	356	267	628	2,889	409	81	317	877	—	6,068
1953.....	196	33	443	235	773	2,975	360	49	357	952	4	6,377
1954.....	218	43	440	224	678	2,945	341	59	428	956	—	6,332
1955.....	254	30	390	202	1,040	3,138	401	57	535	978	—	7,025

Offences.—Thieving is the most prevalent delinquency among boys and, together with receiving stolen goods, was the reason for court appearance in 40.4 p.c. of all cases in 1955. Burglaries, robberies, house- and shop-breaking were committed by 24.5 p.c. of the delinquent boys and another 9.7 p.c. committed wilful acts against property. Only 2.7 p.c. of the boys were guilty of offences against the person and 36.7 p.c. of these were charged with common assault.

Incorrigibility (25.4 p.c.) and thefts (19.9 p.c.) were the complaints against 45.3 p.c. of the delinquent girls in 1955.

26.—Juvenile Delinquents by Group of Offence and Ratio per 100,000 Population 7-16 Years of Age 1946-55

Year	Offences against the Person		Offences against Property with Violence		Offences against Property without Violence		Wilful Offences against Property		Forgery and Offences against Currency		Other Offences		Total Convictions	
	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population
1946.....	173	9	1,353	71	2,594	137	887	47	23	1	2,826	149	7,856	414
1947.....	189	10	1,389	72	2,449	127	677	35	23	1	2,818	147	7,545	392
1948.....	204	10	1,229	64	2,400	124	729	38	15	1	2,578	134	7,155	371
1949.....	176	9	1,346	67	2,244	113	600	30	15	1	1,817	91	6,198	311
1950.....	151	7	1,337	65	2,394	116	667	32	16	1	1,853	90	6,418	311
1951 ¹	188	9	1,542	72	2,563	119	765	36	20	1	1,566	73	6,644	310
1952.....	172	8	1,456	65	2,496	112	633	28	25	1	1,286	5	6,068	272
1953.....	169	7	1,416	61	2,415	103	770	33	19	1	1,588	68	6,377	273
1954.....	184	7	1,444	59	2,489	102	673	28	32	1	1,510	62	6,332	259
1955.....	181	7	1,548	61	2,767	108	629	25	29	1	1,871	73	7,025	275

¹ Newfoundland included from 1951.

27.—Juvenile Delinquents classified by Offence 1951-55

Offence	1951	1952	1953	1954	1955
	No.	No.	No.	No.	No.
Manslaughter and murder.....	—	—	—	—	2
Rape and attempt, carnal knowledge and incest.....	3	3	5	—	3
Indecent assault.....	31	19	28	32	39
Aggravated assault and wounding.....	31	27	16	24	12
Common assault.....	89	65	89	76	71
Endangering life on railway.....	9	25	11	10	3
Other offences against the person.....	25	33	20	42	51
Burglary, breaking and entering.....	1,520	1,411	1,391	1,421	1,522
Robbery.....	22	45	25	23	26
Theft and receiving stolen goods.....	2,553	2,379	2,290*	2,346	2,643
Embezzlement, false pretences and fraud.....	10	16	15	26	26
Arson.....	28	36	34	26	15
Wilful damage to property.....	646	597	736	647	614
Forgery and offences against currency.....	20	25	19	32	29
Incorrigibility and vagrancy.....	484	403	529	441	533
Immorality.....	111	110	139	137	223
Various other offences.....	1,062	874	1,030*	1,055	1,213
Totals.....	6,644	6,068	6,377	6,332	7,025

Sex and Age.—Juvenile delinquents are predominantly boys. The proportion for all offences in 1955 was approximately one girl to eight boys, a ratio which has remained much the same over a long period. Juveniles of 13 to 15 years of age comprised the majority of delinquents in 1955, 73.8 p.c. in the case of boys and 87.7 p.c. in the case of girls. However, 242 boys and 12 girls (3.6 p.c. of the children) were under 10 years of age.

28.—Percentages of Delinquent Boys and Girls by Age Group 1954 and 1955

Age Group	1954			1955		
	Boys	Girls	Both Sexes	Boys	Girls	Both Sexes
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
7 - 12 years.....	26.9	11.2	25.3	25.5	11.5	23.8
13 - 15 years.....	72.4	88.3	74.0	73.8	87.7	75.4
Not given.....	0.7	0.5	0.7	0.7	0.8	0.8
Totals.....	100.0	100.0	100.0	100.0	100.0	100.0

Education and Employment.—Many causes contribute to backwardness in school work. The retarding influence may be illness, over-crowding in the home, disturbed family situations or dull mentality. Presuming that six years is the usual age for entering Grade I, 46.8 p.c. of the boys and girls in 1955 were reported to be two or more years below the normal grade for their age and 4.0 p.c. of the boys and girls were a year or more above it.

Well over half of the boys had attained Grade VII and 44.2 p.c. of the girls Grade VIII at the time of delinquency. The majority of boys who had left school had reached Grades VI to VIII and the girls, Grades VII to IX. Some high school education had been achieved by 20.5 p.c. of the boys and girls.

29.—Age, Sex and School Grade of Delinquent Boys and Girls 1954 and 1955

(B=Boys; G=Girls)

Age	School Grades																Total Delinquents	
	Elementary										Secondary		Auxiliary		Not Given			
	I-IV		V		VI		VII		VIII									
	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1954																		
7 years.....	10	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	11	—
8 ".....	50	3	2	—	—	—	—	—	—	—	—	—	—	—	—	—	52	3
9 ".....	119	5	15	—	—	—	—	—	—	—	—	—	2	—	—	—	137	5
10 ".....	162	8	74	3	15	—	—	2	—	2	—	—	2	—	5	2	262	13
11 ".....	143	10	142	9	111	2	21	1	4	—	—	—	9	—	3	1	433	23
12 ".....	108	5	137	7	197	8	126	6	29	1	4	—	18	1	14	1	633	29
13 ".....	54	3	122	12	218	19	286	27	167	28	50	6	27	2	16	1	940	98
14 ".....	48	7	91	9	196	14	313	40	380	41	287	53	39	7	36	10	1,390	181
15 ".....	33	13	94	16	119	16	259	43	455	68	745	119	29	10	51	9	1,785	294
Not given.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40	3	40	3
Totals, 1954.....	727	54	677	56	857	59	1,007	117	1,037	138	1,086	178	126	20	166	27	5,683	649
1955																		
7 years.....	19	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	1
8 ".....	63	5	—	—	1	—	—	—	—	—	—	—	—	—	—	—	64	5
9 ".....	144	4	11	1	1	—	1	—	—	—	2	—	1	—	—	—	159	6
10 ".....	202	3	60	3	16	—	2	—	—	—	—	—	4	—	2	—	286	6
11 ".....	139	7	134	3	99	4	17	2	2	1	—	—	8	—	1	—	400	17
12 ".....	128	7	167	13	172	18	137	13	27	3	4	—	13	6	2	1	650	61
13 ".....	77	14	129	16	232	23	259	41	197	22	48	7	19	6	10	—	971	129
14 ".....	61	11	106	26	198	21	371	69	413	68	302	63	33	15	14	3	1,498	276
15 ".....	60	9	89	17	200	23	337	64	468	71	875	136	46	6	18	5	2,093	331
Not given.....	—	—	—	—	—	—	1	—	—	—	—	—	—	—	45	7	46	7
Totals, 1955.....	893	61	696	79	915	90	1,124	189	1,107	165	1,231	206	124	33	92	16	6,186	839

In 1955, 9.8 p.c. of the delinquent boys and 17.5 p.c. of the delinquent girls were not attending school. At the time of leaving school their ages ranged from 10 to 15 years, the majority being between 14 and 15 years. Nearly 32 p.c. of the delinquent boys, having left school, were unemployed. The largest group of wage earners (86) were in occupations concerned with transportation, such as messengers, helpers on milk delivery routes, truck drivers' assistants, etc. More than half of the girls were idle after leaving school. Factory work, domestic and personal service were the main occupations of those who were employed.

Birthplaces of Juvenile Delinquents and their Parents.—Canada was the country of birth of 95.3 p.c. of the juvenile delinquents in 1955 (the place of birth was not recorded in 1.0 p.c. of the cases); 3.9 p.c. were born in the British Isles, Europe, the United States, and Latin American countries. Ontario was the province of residence of 49.5 p.c. of those born outside Canada.

Both parents of 75.2 p.c. of the delinquent children in 1955 were born in Canada and another 12.0 p.c. had one parent born in this country. To evaluate these figures comparison should be made of population ratio of children from 7-15 years of age whose parents were Canadian-born with those whose parents were born elsewhere.

Home Circumstances.—The type of home in which he lives and the amount and quality of supervision he receives are important factors in a child's behaviour. The statistics of the marital status of the parents and the place and type of residence of the child reflect home conditions and are worth recording as possible reasons for social or emotional maladjustment. The parents of 78.3 p.c. of the delinquent children were reported to be living together in 1955 but homes broken by separated parents, divorce or death was the background of 19.9 p.c. of the delinquent boys and girls. The mothers of 11.0 p.c. of the juvenile delinquents were employed other than in the home and the mothers of another 2.6 p.c. were dead. The fathers of 6.7 p.c. of the cases were deceased.

Of every five juveniles who appeared in court, four were urban residents; 92.3 p.c. were living in their own homes at the time they got into difficulties; 4.7 p.c. of them were in foster homes, either with a relative or some other person; and institutions were the homes of 1.7 p.c. of them.

Sources of Complaint.—The police were the complainants in the majority of juvenile cases, 85.6 p.c. of the boys having been charged by them. Probation officers and parents were responsible for 3.0 p.c. and 2.8 p.c., respectively, of those charged. School authorities referred 2.1 p.c. of the boys to the courts and social agencies another 1.0 p.c.

The proportion (55.9 p.c.) of girls charged by the police was considerably less than the proportion of boys so charged. Parents made more use of the courts for girls than for boys (17.4 p.c.). School authorities laid complaints in 6.3 p.c., probation officers in 9.3 p.c. and social agencies in 5.1 p.c. of the girls' cases.

Repeaters.—In 1955 approximately one in every four children brought before the courts failed to heed the first warning and made at least a second appearance. In that year 77.2 p.c. of the delinquent children appeared before the courts for the first time, 15.1 p.c. were second offenders, 4.6 p.c. third, and 3.1 p.c. were dealt with by the courts four or more times.

30.—First Offenders and Repeaters of Major Offences 1946-55

Year	Total Delinquents	First Offenders	Repeaters					Percentage of Total Delinquents
			Second	Third	Fourth	Fifth or More	Total	
	No.	No.	No.	No.	No.	No.	No.	
1946.....	4,949	3,430	799	344	155	221	1,519	30.7
1947.....	4,683	3,376	673	329	138	167	1,307	27.9
1948.....	4,591	3,340	674	266	147	164	1,251	27.3
1949 ¹	6,198	5,195	603	208	109	83	1,003	16.2
1950.....	6,418	5,039	892	314	140	33	1,379	21.5
1951 ²	6,644	5,141	909	324	132	138	1,503	22.6
1952.....	6,068	4,412	963	367	155	171	1,656	27.3
1953.....	6,377	5,170	752	230	124	101	1,207	18.9
1954.....	6,332	4,993	895	252	99	93	1,339	21.1
1955.....	7,025	5,423	1,060	326	119	97	1,602	22.8

¹ Minor offences included since 1949.

² Newfoundland included since 1951.

Disposition of Cases.—In 1955 not quite one-half of the children's cases (43.7 p.c.) were heard within four days of the charge and slightly over two-thirds (67.0 p.c.) within nine days. However 9.2 p.c. of them had to wait at least two weeks and 9.8 p.c. waited a month or more before the first hearing. These waiting periods may be explained in various ways.

Some county courts sit only twice or even once a month. Hearings may be deferred because of sickness in the family, school examinations, stormy weather or long distances. The chief cause for delay, however, is the time it takes to investigate the facts properly. The probation officer, and frequently there is only one to a court, has to find out what occurred at the time of the delinquency; he must get in contact with the parents and the school, learn something of the home situation, perhaps arrange medical or psychiatric examinations and explore community resources. The disadvantage of a long waiting period is outweighed by the assistance the court receives in deciding the form of treatment best suited to the child's needs and the type of care that will be the most economical for the community. For these intervening days or weeks most children are left in their own homes while a minority are placed in detention homes and, in the long run, whether the effect of the waiting period is good or bad is determined by the care given the youngster during that time.

Juvenile court judges heard 93.4 p.c. and magistrates 5.8 p.c. of the juvenile cases before the courts. The balance were heard by justices of the peace. The proportion of those declared delinquent (93.7 p.c.) in the magistrate's courts was greater than in the juvenile courts (85.3 p.c.). In the former court 4.4 p.c. of the cases were dismissed while in the juvenile courts only 2.4 p.c. were dismissed but 12.3 p.c. were adjourned *sine die*.

Some courts consider children whose hearings are adjourned *sine die* as delinquent while others do not but, for the sake of uniformity in this report, the latter point of view is maintained by the Dominion Bureau of Statistics. In assessing the total problem of juvenile delinquency, however, cases adjourned *sine die* have to be taken into account for, when the proportion of cases dealt with in this way increases, the proportion of those declared delinquent declines.

31.—Juveniles before the Courts, Dismissed and Delinquent 1951-55

Item	1951		1952		1953		1954		1955	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Before the courts.....	7,521	100.0	7,213	100.0	7,829	100.0	7,751	100.0	8,187	100.0
Dismissed.....	195	2.6	178	2.5	216	2.8	237	3.1	207	2.5
Adjourned <i>sine die</i>	682	9.1	967	13.4	1,236	15.8	1,182	15.2	955	11.7
Delinquent.....	6,644	88.3	6,068	84.1	6,377	81.4	6,332	81.7	7,025	85.8

Sentences for delinquent boys usually differ somewhat from those for girls. In 1955 the proportion of boys put on probation was 48.8 p.c. and of girls 49.3 p.c. Fines or restitution were meted out to 16.3 p.c. of the boys but to only 6.9 p.c. of the girls. This is because damage to property, for which restitution seems a reasonable adjustment, is committed relatively more often by boys than by girls. A much larger proportion of girls (33.7 p.c.) than boys (14.4 p.c.) were sent to training schools. Final disposition of case was postponed for 8.6 p.c. of the girls and 16.9 p.c. of the boys were given suspended sentences.

32.—Disposition of Delinquents by Type of Sentence 1946-55

Year	Reprimanded		Probation of Court		Protection of Parents		Fined or Made Restitution		Detained Indefinitely		Sent to Training School		Final Disposition Suspended		Corporal Punishment	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
1946.....	233	3.0	2,291	29.2	67	0.8	1,854	23.6	53	0.7	1,180	15.0	2,150	27.4	28	0.3
1947.....	182	2.4	2,273	30.1	69	0.9	2,116	28.1	40	0.5	1,108	14.7	1,733	23.0	24	0.3
1948.....	248	3.4	2,201	30.8	55	0.8	1,850	25.8	47	0.7	1,120	15.6	1,622	22.7	12	0.2
1949.....	196	3.2	2,141	34.5	98	1.6	1,655	26.7	39	0.6	1,036	16.7	1,029	16.6	4	0.1
1950.....	354	5.5	2,392	37.3	94	1.4	1,148	17.9	26	0.4	1,144	17.8	1,257	19.6	3	0.1
1951 ¹	309	4.6	2,313	34.8	154	2.3	1,433	21.6	45	0.7	1,141	17.2	1,247	18.7	2	0.1
1952.....	243	4.0	2,412	39.8	148	2.4	1,015	16.7	1	--	1,152	19.0	1,095	18.1	2	--
1953.....	227	3.6	2,620	41.1	186	2.9	1,147	18.0	28	0.4	1,107	17.4	1,062	16.6	--	--
1954.....	199	3.1	2,595	41.0	174	2.8	1,095	17.3	27	0.4	1,121	17.7	1,119	17.7	2	--
1955.....	181	2.6	3,067	43.7	365	5.2	1,064	15.1	50	0.7	1,180	16.8	1,118	15.9	--	--

¹ Newfoundland included from 1951.

Section 4.—Police Forces

The Police Forces operating in Canada are organized under three groups: (1) the Federal Force, which is the Royal Canadian Mounted Police whose operations cover a very wide field in addition to purely police work; (2) Provincial Police Forces—the Provinces of Ontario and Quebec have organized their own Provincial Forces, but the other provinces engage the services of the Royal Canadian Mounted Police to perform parallel functions within their boundaries; (3) Municipal Police—every urban centre of reasonable size has its own police organization which is paid for by the local taxpayers and which attends to police matters within the borders of the municipality concerned.

Subsection 1.—The Royal Canadian Mounted Police*

The Royal Canadian Mounted Police is a Civil Force maintained by the Federal Government. Organized in 1873 as the North West Mounted Police, its duties were confined to what was then known as the North West Territories. By 1904 the work of the Force received signal recognition when the prefix "Royal" was bestowed upon it by King Edward VII. In 1905 when Alberta and Saskatchewan were constituted Provinces an arrangement was made whereby the Force continued to discharge its duties as formerly, each Province making a contribution towards defraying the cost. This arrangement was continued until 1917.

In 1918 the Royal North West Mounted Police was assigned the duty of enforcing Dominion legislation for the whole of Canada west of Port Arthur and Fort William. Soon after the end of World War I an extension of governmental activities made it obvious that the enforcement of Dominion statutes throughout Canada must be the responsibility of a Dominion Force and therefore the jurisdiction of the Royal North West Mounted Police was extended to the whole of Canada early in 1920. In that year the name of the Force was changed to the Royal Canadian Mounted Police and the former Dominion Police with Headquarters at Ottawa, whose duties were largely connected with guarding public buildings in that city and Canadian Government dockyards at Halifax, N.S., and Esquimalt, B.C., was absorbed by the Royal Canadian Mounted Police.

The Force is controlled and administered by a Minister of the Crown (the Minister of Justice). Its Commissioner has the rank and status of a Deputy Minister. Officers are commissioned by the Crown and are selected from serving non-commissioned officers. The Force is divided into 17 Divisions, including the Marine Division, with Headquarters at Ottawa, Ont. There are 613 detachments distributed over the entire country. Its land transportation consists of 1,359 motor vehicles, most of which are fitted with two-way radio sets connecting with wireless stations operated by the Force. Such stations operate in both Western and Eastern Canada, including the Quebec-United States boundary area. The Air Division of the Force operates 13 aircraft of various types. The strength of the Force is 4,863 officers and men, with a reserve strength of 300. The reserve strength is located chiefly in the larger cities where men can be congregated easily and where instruction can be given in the evenings. The Marine Division has a strength of 219 officers and men and operates 28 ships of various kinds, the majority of which are located on the Atlantic and Pacific Coasts and on the Great Lakes. The Personnel Branch of the RCMP has officers in each Division across the country. Great care is taken in the selection of recruits.

The Royal Canadian Mounted Police is responsible for enforcing federal laws throughout Canada and is specially empowered to deal with infractions against smuggling by sea, land and air. It also enforces the provisions of the Excise Act and is responsible for the suppression of traffic in narcotic drugs. In all, the Force has responsibility in over 50 Federal Government Acts including the Indian Act. It also assists many departments of the Federal Government in administrative duties and is responsible for the protection of government buildings and property. It is the sole police force operating in the Yukon and Northwest Territories. Furthermore it undertakes secret and security services for the Federal Government. In addition to its federal duties agreements have been made with the Provinces of Alberta, Saskatchewan, Manitoba, Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and British Columbia whereby the services of the Royal Canadian Mounted Police can be secured to enforce provincial laws and the Criminal Code in rural districts upon payment for such services. The agreement with Saskatchewan has been in existence since 1928 and those with the Provinces of Alberta, Manitoba, New Brunswick, Nova Scotia and Prince Edward Island since 1932. The agreements were entered into with the Provinces of Newfoundland and British Columbia in August 1950 and the police forces of those Provinces were absorbed by the Royal Canadian Mounted Police. The Force has agreements also for policing more than 124 district municipalities, cities and towns.

* Revised by Commissioner L. H. Nicholson, M.B.E., Royal Canadian Mounted Police, Ottawa.
91593—22½

The services of Royal Canadian Mounted Police experts in fingerprints, crime-index information, examination of firearms and questioned documents are available to all other police forces in Canada. A *Police Gazette*, issued monthly and containing instructional articles on police work as well as the latest information on wanted or missing persons, is sent to all police forces across the country. The Force has two Police Colleges that are open to selected personnel from other police forces in Canada and to a more limited number of those outside its boundaries.

The Royal Canadian Mounted Police has gained and held an outstanding position in the police world by its adherence to certain basic conceptions, as outlined in the following special article.

THE PHILOSOPHY OF THE ROYAL CANADIAN MOUNTED POLICE

If the philosophy of the Royal Canadian Mounted Police could be expressed in one word, that word would be "service". Service to the individual and to the community has always been the creed of the Force. It began when the North West Mounted Police went to the prairies in 1873, at which time it was essentially a frontier and a rural police force. The opportunity to give greater service arose in 1920 when, as the Royal Canadian Mounted Police, the organization acquired new responsibilities by expanding its field of operation over the whole of Canada. Since that time still greater opportunities have arisen as the Force has accepted certain provincial as well as wider federal duties.

The service rendered has included dealing with pioneer problems in Western Canada and the North, combating Canada's illicit drug traffic, preventing smuggling on the coasts and the United States border, policing rural areas from coast to coast, patrolling the Arctic and providing Canada's security service. In performing these duties, a strong sense of service has developed in individual members, and therein lies the real strength of the Force.

In order to master its original problems and to survive the conditions under which it was to function, the Force was organized as a semi-military body. And because this kind of organization has proved of lasting value, the training of present-day recruits and the work of the Force are still carried out in a semi-military atmosphere. It is not correct, however, to say that Royal Canadian Mounted Police discipline is military in character. Rather it is a training that serves the unique needs of the Force, which recognizes that discipline must be intelligently enforced and accepted in order to maintain high standards in an organization of some 4,800 members spread over the whole of Canada.

The Royal Canadian Mounted Policeman is impressed with the idea that public esteem for the law and its administration depends in large part on the exemplary behaviour of the individual who enforces that law. The Force therefore insists that discipline, as it pertains to its members, must set moral standards, often at a level higher than those displayed by the average citizen. Thus, a member must at all times act in accordance with the letter of the law and the spirit of the law—civil as well as moral law. Unless he is prepared to adopt this attitude he cannot approach his duties in the manner required of him.

In addition to discipline, the Force stresses the need for a strong sense of public service, initiative, independence of mind, and adaptability to changing conditions. These qualities are essential to the success of every member of the Royal Canadian Mounted Police and an effort is made to show all members, as early as possible, why they are desirable, not only for the sake of the Force but also for the country. At the same time, the Force realizes that it is not possible to convey the full meaning of public service until a member has had practical experience and has developed a satisfaction from his work.

The word "service" means different things to different people. To a member of the Royal Canadian Mounted Police, as distinct from most other public servants, it must be related to what the public in a democracy such as Canada requires of its police forces. Every member of the Royal Canadian Mounted Police, from his earliest days in training, is impressed with the fact that despite his powers as a peace officer, which are given him to carry out his many duties, his rights are no more than those of any other citizen. He must also understand that, although it is his duty to investigate crime, it is the courts of

the country which assess the evidence collected and administer justice. Every member of the Force must realize that his work, though important, is only one link in the legal chain, and that he must be scrupulously careful always to act within the law.

The Royal Canadian Mounted Police has proved that, given a sound sense of service, it is not difficult to maintain high standards. However, the Force considers it is not sufficient to appeal to idealism. Conditions of service receive attention at all levels so that men may develop a pride in their leaders and in their organization. Also, effort is made to develop in each member a sense of accomplishment, both in himself as an individual and in the Force as a whole. This is achieved through his work, through the personal attention paid to his progress and development by his superiors and through the opportunity given him to gain recognition and promotion for initiative, industriousness and devotion to duty.

The sense of accomplishment on a Force-wide basis is developed through a knowledge of the history of the Force, its present responsibilities, and its place in the development of Canada. The Force keeps alive all the colourful and inspiring traditions of the past and, although the work is now somewhat less colourful, it is still inspiring and of vital importance to the country.

Ever since its inception as the North West Mounted Police, the first aim of the Force has been the prevention of crime. The detection of crime has been of secondary importance. Both prevention and detection today, however, demand vastly different methods of procedure from those of early days. Modern methods of living and modern methods of commerce and industry permit the committing of crimes by methods not formerly possible. Crimes arising out of business have become more prevalent as have crimes arising out of the use of automobiles. Modern transport enables criminals to leave scenes of crime quickly and to commit similar crimes at distant points. The police of today can combat crime only by using modern methods. The realization of the need for advanced criminology has had a great influence on the Royal Canadian Mounted Police. Scientific laboratories have been set up, staffed by laboratory detectives who are more than a match for the criminals with whom they contend. Policemen are trained to understand and recognize modern and scientific criminal methods. They are also trained to understand and to use or to avail themselves of scientific methods for combating crime. Policemen in the field, on whom the scientific laboratories depend to collect and protect the material upon which they have to work, are given extensive courses in scientific crime detection, both in their initial training and from time to time throughout their careers. This leads to a constant awareness of up-to-date methods during daily work at all levels of the organization.

A further aspect of Royal Canadian Mounted Police development lies in its growing links with other police forces. The value to the public of co-operation between the Royal Canadian Mounted Police and other police forces in Canada and in other parts of the world, through the International Criminal Police Organization and similar bodies, becomes more evident each day. Indeed, in its unique position as a police force with federal, provincial and municipal police responsibilities, the Royal Canadian Mounted Police is increasingly aware of the necessity for the closest co-operation among all agencies engaged in combating crime and with law-abiding citizens.

The attitude of the public toward any police force depends in large part on the policemen the public meets personally, whether on a prairie farm, on the highway or on the beat in a large city. A police force may be up-to-date in every respect but unless relations between the police and the public lead the citizen to identify himself with his police force, a desirable situation will not exist. It is this sense of citizen-police identification which develops public confidence, and without this confidence police work becomes difficult if not impossible. Members of the Royal Canadian Mounted Police, therefore, are taught to strengthen citizen-police co-operation and are encouraged to approach their work with a sincere desire to develop good public relations. The paramount aim is to provide well-trained, courteous policemen who will win the confidence of the public by serving with efficiency and zeal, and who will also merge with and be a respected part of the community in which they live.

Although through continuous good service the Force has secured for itself a place of confidence in the minds of the Canadian public, its present performance is being used as a measure for raising standards in the future. By developing in its members an ever-increasing sense of loyalty and pride, the Force is endeavouring to improve the quality of service which is now synonymous with the name "Royal Canadian Mounted Police".

Subsection 2.—Provincial Police Forces*

Quebec Provincial Police Force.—This Force is responsible for upholding law and order over the whole territory of the Province from the provincial boundary between Ontario and Quebec to the Magdalen Islands in the Gulf of St. Lawrence. The Force is composed of about 1,000 men in charge of a Director, who is responsible to the Attorney-General of the Province.

To facilitate operations the territory is divided into two almost equal parts designated as the District of Montreal and the District of Quebec. The Director has his office in Montreal and an Assistant Director is situated in the city of Quebec. Working under these Directors are two Deputies and an Inspector General. In each District the Police Force is divided into three sections: the detective corps, the constabulary and the traffic officers. Each section is in charge of a captain supported by a number of lieutenants and sergeants.

A province-wide frequency modulation radio-communication system has been established at Montreal. A main station operating on the top of Mount Royal directs radio equipped cars within a radius of between 60 and 80 miles around Montreal; similar stations operating from the cities of Quebec and Three Rivers direct the mobile units operating in their respective areas. Substations operate at each of the eight bridges giving access to or exit from the city of Montreal and a number of cars, all equipped with three-way radio units, patrol the surrounding country day and night.

Ontario Provincial Police.—The Ontario Provincial Police Force is maintained by the Ontario Government and administered by the Attorney-General's Department. It is responsible for law enforcement in the rural and unorganized parts of the Province and in certain municipalities by contract. The development of the Force from its beginning in the early years of Confederation to the passing of the Police Act in 1946, is outlined in the 1950 Year Book, pp. 332-333.

The Force, with a strength of approximately 1,550 in 1956, consists of a General Headquarters at Toronto and District Headquarters at Chatham, London, Dundas, Niagara Falls, Newmarket, Mount Forest, Barrie, Peterborough, Belleville, Perth, Cornwall, North Bay, Sudbury, Sault Ste. Marie, Timmins, Port Arthur and Kenora. Each District has Detachments adequate to meet local law enforcement requirements. A Criminal Investigations Branch, under the command of a Chief Inspector, is maintained at Toronto to handle crimes of a major nature.

The Force operates one of the largest frequency modulation radio networks in the world, which is a most efficient method of combating every type of lawlessness. The network includes sixty fixed stations—forty-four 60-watt stations and sixteen 250-watt stations, one of which is dual-controlled—and 515 radio-equipped mobile units including five boats operating on Lake Temagami, Lake Simcoe, Lake Nipissing, Lake of the Woods, and Georgian Bay.

As of May 1957, the Ontario Police Force was policing 69 municipalities which requested this service under the provisions of the Police Act.

Subsection 3.—Municipal Police Statistics

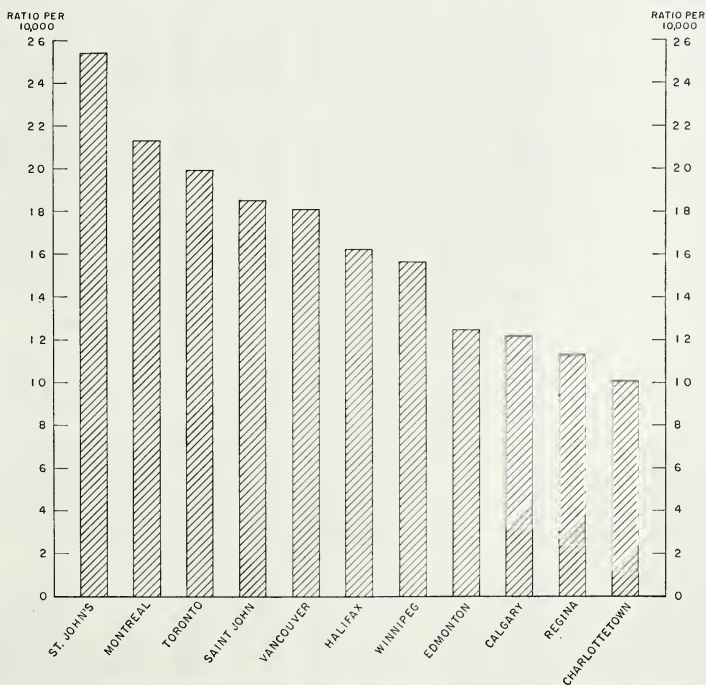
Police statistics were submitted to the DBS for 1955 by Chiefs of Police in 239 urban centres, 16 district communities, 15 townships and one unorganized district, all of 4,000 population or over. The ratio of police per 1,000 population in urban centres of 4,000 population or over for each province was as follows:—

* Revised by Geo. A. Shea, O.B.E., Secretary-Treasurer, Canadian Association of Chiefs of Police, Montreal, Que.

<i>Province</i>	<i>Police per 1,000 Population</i>	<i>Province</i>	<i>Police per 1,000 Population</i>
Newfoundland.....	2.2	Manitoba.....	1.5
Prince Edward Island.....	1.1	Saskatchewan.....	1.5
Nova Scotia.....	1.2	Alberta.....	1.7
New Brunswick.....	1.6	British Columbia.....	1.5
Quebec.....	1.7		
Ontario.....	1.6	ALL PROVINCES.....	1.6

Police statistics for 1954 and 1955 are shown for urban centres of 10,000 population or over in each province in Table 33, and totals are given therein for centres of from 4,000 to 10,000 population. The figures in the column "Offences Known to the Police" include offences and attempted offences which became known to the police, having been reported by any person (including a police officer). Complaints about offences or attempts which, upon investigation, proved to be groundless are not included. Offences known to the police provide the basic data for estimating the prevailing volume and trends of criminality.

RATIO OF MUNICIPAL POLICE FORCES TO POPULATION
IN CERTAIN CITIES, 1955



33.—Police Statistics for Incorporated Centres of 10,000 Population or Over, and Totals for Incorporated Centres of 4,000-10,000 Population 1954 and 1955

Province and Urban Centre	Population 1951	Police on Force		Offences Known to Police		Prosecutions		Arrests	
		1954	1955	1954	1955	1954	1955	1954	1955 ¹
Newfoundland	No.	No.	No.	No.	No.	No.	No.	No.	No.
Totals, 10,000 or Over..	52,873	131	145	2,300	17,837	12,287	17,801	1,211	1,208
St. John's.....	52,873	131	145	2,300	17,837	12,287	17,801	1,211	1,208
Totals, 4,000-10,000.....	13,291	28	29	3,115	2,240	2,242	1,584	677	206
Prince Edward Island									
Totals, 10,000 or Over..	15,887	17	17	1,104	5,168	1,080	5,128	944	873
Charlottetown.....	15,887	17	17	1,104	5,168	1,080	5,128	944	873
Totals, 4,000-10,000.....	6,547	7	7	425	698	597	664	331	268
Nova Scotia									
Totals, 10,000 or Over..	178,708	238	257	13,389	9,349	26,306	18,375	7,593	1,097
Dartmouth.....	15,037	15	15	1,530	305	1,319	1,106	822	..
Glace Bay.....	25,586	22	22	1,151	1,670	1,024	2,456	806	297
Halifax.....	85,589	137	152	6,321	3,194	18,500	6,466	3,657	..
New Waterford.....	10,423	10	8	380	172	565	145	240	..
Sydney.....	31,317	42	49	3,929	3,550	3,992	6,329	1,430	..
Truro.....	10,756	12	11	78	458	906	1,873	638	800
Totals, 4,000-10,000.....	69,186	41	45	3,339	3,204	4,811	4,735	1,866	630
New Brunswick									
Totals, 10,000 or Over..	104,881	177	186	6,146	15,906	20,651	20,571	4,998	1,192
Edmundston.....	10,753	13	13	448	568	611	791	309	..
Fredericton.....	16,018	25	29	1,341	1,196	1,704	3,066	939	..
Moncton.....	27,334	48	47	1,547	4,887	2,506	3,991	1,066	1,192
Saint John.....	50,779	91	97	2,810	9,255	15,830	12,723	2,684	..
Totals, 4,000-10,000.....	30,613	29	29	2,395	3,214	2,897	5,212	1,889	570
Quebec									
Totals, 10,000 or Over..	1,937,502	3,466	3,608	471,691	864,072	535,894	160,107	39,479	30,069
Arvida.....	11,078	19	18	198	632	180	583	98	..
Cap de la Madeleine..	18,667	24	26	954	638	484	555	484	193
Chicoutimi.....	23,111	25	24	838	327	1,064	..	415	..
Drummondville.....	14,341	17	28	739	1,063	1,688	750	457	..
Granby.....	21,989	23	25	267	734	507	370	97	..
Grand Mère.....	11,089	..	..	..	..	..	..	..	..
Hull.....	43,483	45	46	8,990	10,256	7,876	9,208	1,294	..
Jacques-Cartier.....	22,450	24	27	376	2,872	943	1,289	135	..
Joliette.....	16,064	24	17	399	571	324	403	52	93
Jonquière.....	21,618	20	25	1,631	115	574	176	422	602
Lachine.....	27,773	27	28	904	4,952	1,663	1,725	348	158
LaSalle.....	11,633	20	21	361	761	416	496	149	76
Lévis.....	13,162	18	17	167	762	843	719	142	176
Longueuil.....	11,103	14	14	888	1,034	624	672	68	..
Magog.....	12,423	11	11	415	314	436	1	29	18
Montreal.....	1,021,520	2,260	2,364	370,173	745,733	370,421	64,378	24,717	21,349
Montreal North.....	14,081	..	..	..	..	..	..	..	..
Mount Royal.....	11,352	26	27	4,325	3,938	4,225	3,797	5	40
Outremont.....	30,057	48	48	11,383	10,967	9,990	11,643	339	119
Quebec.....	164,016	287	294	26,133	30,131	82,929	21,844	3,334	3,067
Rimouski.....	11,565	7	7	138	668	504	..	81	50
Rouyn.....	14,633	13	15	683	222	8,582	63	389	..
St. Hyacinthe.....	20,236	26	29	1,047	2,470	3,427	2,860	323	208
St. Jean.....	19,305	22	21	157	164	11	2	7	..
St. Jérôme.....	17,685	17	18	368	2	332	166	345	..
St. Laurent.....	20,426	33	39	756	4,876	4,560	3,496	206	78
St. Michel.....	10,539	23	22	139	1,009	2,150	882	47	..
Shawinigan Falls.....	26,903	44	44	32	3,883	1,426	86	257	16
Sherbrooke.....	50,543	67	67	8,574	9,841	7,480	9,349	1,061	679
Sillery.....	10,376	8	10	841	137	46	2	4	..
Sorel.....	14,961	19	19	719	865	418	1,397	340	431
Thetford Mines.....	15,095	20	20	1,390	1	375	2,313	246	160
Three Rivers.....	46,074	83	87	7,519	8,186	6,801	7,833	1,314	1,459
Valleyfield.....	22,414	31	32	188	690	743	28	29	8
Verdun.....	77,391	67	63	6,081	6,109	4,801	3,253	1,265	761
Victoriaville.....	13,124	12	13	52	29	1,160	970	162	63
Westmount.....	25,222	42	42	13,866	9,120	7,891	8,798	818	265
Totals, 4,000-10,000.....	319,331	332	320	16,768	36,772	22,920	18,154	3,767	2,315

¹ Arrests other than for traffic and parking offences.

33.—Police Statistics for Incorporated Centres of 10,000 Population or Over, and Totals for Incorporated Centres of 4,000-10,000 Population 1954 and 1955—continued

Province and Urban Centre	Population 1951	Police on Force		Offences Known to Police		Prosecutions		Arrests	
		1954	1955	1954	1955	1954	1955	1954	1955 ¹
Ontario	No.	No.	No.	No.	No.	No.	No.	No.	No.
Totals, 10,000 or Over..	2,106,708	3,390	3,478	1,075,121	1,092,359	1,114,683	1,149,537	72,577	55,569
Barrie.....	12,514	14	16	2,658	1,663	1,342	3,140	462	3
Belleville.....	19,519	24	24	2,273	3,576	2,389	3,829	589	649
Brantford.....	36,727	41	54	1,828	5,930	2,107	5,360	656	546
Brockville.....	12,301	16	15	1,493	7,880	3,423	5,156	498	..
Chatham.....	21,218	34	33	3,112	12,921	2,349	2,820	449	448
Cornwall.....	16,899	20	22	1,772	2,457	1,556	3,235	429	469
Eastview.....	13,799	10	11	1,395	956	724	754	65	90
Forest Hill.....	15,305	31	34	432	5,712	4,068	13,405	83	71
Fort William.....	34,947	47	51	3,632	2,630	9,018	2,422	1,139	107
Galt.....	19,207	18	19	1,663	2,410	1,375	2,495	241	337
Guelph.....	27,386	34	40	12,143	515	12,177	4,650	653	570
Hamilton.....	208,321	357	364	145,146	6,121	145,918	143,459	5,985	3,925
Kingston.....	33,459	56	56	32,141	33,093	24,282	23,989	1,517	1,505
Kitchener.....	44,867	60	70	9,432	6,203	6,631	6,139	661	533
Leaside.....	16,233	18	20	6,592	348	6,356	617	41	97
London.....	95,343	143	160	77,627	71,864	75,191	13,852	1,830	..
Mimico.....	11,342	10	10	1,942	2,097	1,657	2,897	112	85
New Toronto.....	11,194	15	16	1,762	6,031	1,762	2,019	331	179
Niagara Falls.....	22,874	40	39	5,215	3,769	4,968	3,722	699	605
North Bay.....	17,944	25	26	3,091	3,502	2,823	3,115	1,211	1,303
Orillia.....	12,110	9	11	992	4,117	994	1,748	278	..
Oshawa.....	41,545	50	50	4,650	6,000	20,281	7,126	1,052	985
Ottawa.....	202,045	298	303	9,030	9,707	31,674	37,448	3,656	3,536
Owen Sound.....	16,423	18	20	1,462	1,656	3,410	1,625	528	..
Pembroke.....	12,704	12	12	1,030	1,981	882	2,051	697	664
Peterborough.....	38,272	46	45	4,861	439	4,536	2,849	637	..
Port Arthur.....	31,161	54	54	6,781	13,803	13,255	14,769	3,204	2,629
St. Catharines.....	37,984	50	51	3,473	4,891	13,587	18,676	1,007	969
St. Thomas.....	18,173	21	22	2,562	2,642	2,389	4,004	297	258
Sarnia.....	34,697	53	53	7,693	5,461	4,941	5,501	794	820
Sault Ste. Marie.....	32,452	42	44	2,473	2,303	6,745	9,996	963	1,046
Stratford.....	18,755	20	20	337	753	1,236	974	228	..
Sudbury.....	42,410	58	58	17,599	14,690	16,697	13,684	2,547	..
Timmins.....	27,743	26	26	7,033	1,667	7,009	2,953	754	725
Toronto.....	675,754	1,326	1,332	634,033	781,102	618,849	703,238	33,542	28,834
Trenton.....	10,085	14	16	446	641	2,761	6,091	341	355
Waterloo.....	11,991	14	13	3,032	197	3,000	3,784	169	123
Welland.....	15,382	22	22	5,615	4,658	4,442	4,859	304	..
Windsor.....	120,049	223	225	45,385	50,785	43,663	55,354	3,479	2,694
Woodstock.....	15,544	21	21	2,285	5,188	4,186	5,722	449	409
Totals, 4,000-10,000.....	275,918	284	301	28,099	44,868	41,012	52,106	5,506	2,758
Manitoba									
Totals, 10,000 or Over..	282,650	433	450	15,057	110,523	127,621	185,662	7,317	7,061
Brandon.....	20,598	22	21	1,455	5,356	4,162	751	249	284
St. Boniface.....	26,342	24	29	6,517	6,704	5,744	5,335	349	291
Winnipeg.....	235,710	387	400	7,085	98,463	117,715	179,576	6,719	6,486
Totals, 4,000-10,000.....	37,387	38	39	2,113	8,169	6,481	4,057	808	318
Saskatchewan									
Totals, 10,000 or Over..	166,091	225	245	19,253	79,300	41,332	70,116	5,677	2,652
Moose Jaw.....	24,355	30	31	2,526	6,359	6,002	4,833	898	669
Prince Albert.....	17,149	19	20	1,739	1,500	3,371	3,272	712	490
Regina.....	71,319	94	102	8,323	30,307	26,685	23,429	2,284	..
Saskatoon.....	53,268	82	92	6,665	41,134	5,274	38,582	1,783	1,493
Totals, 4,000-10,000.....	33,611	40	46	4,349	9,188	10,023	15,592	836	725
Alberta									
Totals, 10,000 or Over..	323,002	496	557	53,207	360,219	40,537	62,610	11,087	12,176
Calgary.....	129,060	204	222	17,226	89,377	11,431	11,243	5,011	4,737
Edmonton.....	159,631	240	284	29,478	256,529	20,229	33,125	8,208	6,547
Lethbridge.....	22,947	29	28	4,958	8,747	7,139	17,429	527	576
Medicine Hat.....	16,364	23	23	1,545	5,566	1,738	843	341	316
Totals, 4,000-10,000.....	20,845	27	32	6,277	2,976	6,299	2,039	685	336

¹ Arrests other than for traffic and parking offences.

33.—Police Statistics for Incorporated Centres of 10,000 Population or Over, and Totals for Incorporated Centres of 4,000-10,000 Population 1954 and 1955—concluded

Province and Urban Centre	Population 1951	Police on Force		Offences Known to Police		Prosecutions		Arrests	
		1954	1955	1954	1955	1954	1955	1954	1955 ¹
	No.	No.	No.	No.	No.	No.	No.	No.	No.
British Columbia									
Totals, 10,000 or Over...	462,468	799	844	69,078	187,106	127,403	362,842	18,568	17,106
New Westminster....	28,639	46	46	10,441	11,022	6,983	10,067	1,025	—
North Vancouver.....	15,687	..	17	..	275	..	1,728	..	159
Penticton.....	10,548	10	10	1,891	1,697	1,489	1,535	299	..
Trail.....	11,430	12	15	4,183	6,027	4,323	11,225	93	102
Vancouver.....	344,833	638	665	30,822	138,568	94,034	277,714	15,958	15,598
Victoria.....	51,331	93	91	21,741	29,517	20,574	60,573	1,193	1,247
Totals, 4,000-10,000....	75,700	107	122	13,428	17,368	13,491	21,884	5,539	5,069
Grand Totals, Incorporated Centres of 10,000 Population or Over.....	5,635,773	9,372	9,787	1,727,346	2,741,839	2,047,794	2,052,769	172,451	129,003
Grand Totals, Incorporated Centres of 4,000-10,000 Population.....	882,432	933	970	80,308	128,697	110,773	126,027	21,404	13,225

¹ Arrests other than for traffic and parking offences.

Section 5.—Penal Institutions and Training Schools

Penal institutions may be classified under three headings: (1) penitentiaries, where prisoners have long sentences and the turnover is slow; (2) reformatories, where the turnover is also rather slow; and (3) common gaols, where the turnover is extremely rapid.

If the average of the figures for inmates at the beginning and at the end of the year be considered the average population for the year, and the number of discharged as the turnover, the turnover in the years 1954 and 1955 was: in penitentiaries, 61 and 51 p.c.; in reformatories, 351 and 365 p.c.; and in gaols, no less than 1,658 and 1,712 p.c. respectively.

In considering these figures it should be borne in mind that the common gaol population changes from day to day and is made up partly of accused persons awaiting trial who may be either liberated or sent to a penitentiary or reformatory.

34.—Movement of Population in Penitentiaries, Reformatories and Gaols 1952-55

Type of Institution and Item	1952	1953	1954	1955
	No.	No.	No.	No.
Penitentiaries—				
Inmates in custody at beginning of year.....	4,817	4,686	4,934	5,120
Admitted during the year.....	2,181	3,119	3,275	3,096
Discharged during the year.....	2,312	2,871	3,089	2,709
In custody at end of year.....	4,686	4,934	5,120	5,507
Reformatories for Men—				
Inmates in custody at beginning of year.....	2,622	2,828	2,818	2,906
Admitted during the year.....	8,613	9,331	10,081	10,804
Discharged during the year.....	8,407	9,341	9,993	10,720
In custody at end of year.....	2,828	2,818	2,906	2,990
Reformatories for Women—				
Inmates in custody at beginning of year.....	160	178	160	155
Admitted during the year.....	451	513	591	622
Discharged during the year.....	433	531	603	612
In custody at end of year.....	178	160	148	165

34.—Movement of Population in Penitentiaries, Reformatories and Gaols 1952-55— concluded

Type of Institution and Item	1952	1953	1954	1955
	No.	No.	No.	No.
Common Gaols—				
Inmates in custody at beginning of year.....	5,445	5,599	5,779	6,283
Admitted during the year.....	87,917	93,890	100,519	108,668
Discharged during the year.....	87,763	93,710	100,015	108,554
In custody at end of year.....	5,599	5,779	6,283	6,397
Totals—				
Inmates in custody at beginning of year.....	13,044	13,291	13,691	14,464
Admitted during the year.....	99,162	106,853	111,466	123,190
Discharged during the year.....	98,915	106,453	113,700	122,595
In custody at end of year.....	13,291	13,691	14,457	15,059

Subsection 1.—Penitentiaries*

The penitentiaries of Canada are administered by the Penitentiaries Branch of the Department of Justice. Eight institutions are included in the system, the two largest being at Kingston, Ont., and St. Vincent de Paul, Que. Others are at Dorchester, N.B., Prince Albert, Sask., Stony Mountain, Man., New Westminster, B.C., Collin's Bay, Ont., and St. John's, Nfld., though the latter is operated under provincial authority. Included also in the system is a Federal Training Centre at St. Vincent de Paul operated for the treatment and training of offenders under 25 years of age and a Penitentiary Staff College at Kingston for the training of penitentiary officers through courses of instruction and training conferences. In April 1957, Joyceville Institution, ten miles from Kingston, started operating as part of Kingston Penitentiary. Its present accommodation is limited to 48 inmates, but when construction is completed the capacity of this new eastern institution will be increased to 500. It will then become a self-contained organization distinct from Kingston Penitentiary. During the year ended Mar. 31, 1956, the average daily population of the penitentiaries was 5,237 and the total net cash outlay for maintenance for the year was \$8,832,502 or \$4.62 per inmate per day.

Females given penitentiary sentences in the various provinces are sent to the Prison for Women at Kingston, Ont., where special quarters and staff are maintained for their detention and supervision; inmates in custody on Mar. 31, 1956, numbered 84.

Since the proclamation of the Penitentiary Act on Sept. 1, 1947, many of the recommendations of the Royal Commission (1938)—usually called the Archambault Commission—to investigate the penal system in Canada have been implemented. The Commission made 88 recommendations 68 of which involved action on the part of the Federal Government and the other 20 involved either joint action with the provinces or were the responsibility of the provinces and/or local communities.

Of the 68 recommendations which called for action on the part of the Federal Government, at least 50 have been or are in process of being carried out. Among these are the following:

- (1) In 1947 the headquarters administration of the penitentiaries was completely reorganized, a move which included the appointment of a Commissioner responsible directly to the Minister of Justice, and of Deputy and Assistant Commissioners to assist him in the performance of his duties.
- (2) Wardens have been given full responsibility for the executive management of their institutions under the direction of the Commissioner. Four conferences of all Penitentiary Wardens have been held in Ottawa since 1947.

* Prepared under the direction of R. B. Gibson, Commissioner of Penitentiaries, Ottawa.

- (3) More than half of all the penitentiary staffs have so far attended training courses at the Penitentiary Staff College at Kingston. In addition, in-service training officers have been appointed at all institutions and local training is carried out for all newly appointed officers.
- (4) The pay of penitentiary officers has been increased in nearly all cases by at least 100 p.c. since the Commission's report. For example, guards in 1938 received a maximum salary of \$1,500 and now receive \$3,600. The 40-hour week was introduced in 1955.
- (5) A complete revision of the methods of classifying prisoners has been made and two or more qualified Classification Officers are now employed at each institution. These officers assess each inmate, after obtaining information as to his previous record, social habits, aptitudes, educational attainments and general background, and submit their reports to a Classification Board for decision upon a plan for treatment and employment. The Classification Officers work in close co-operation with officials of the National Employment Service and the Prisoners' Aid Societies in planning employment and assistance on the prisoner's release and officials of these organizations regularly visit the penitentiaries and interview inmates.
- (6) Full-time vocational training courses in most of the construction trades have been set up at five institutions under competent teacher-trainers, the courses lasting for a period of nine months. Necessary equipment, tools and materials to turn out well qualified tradesmen are provided. Results to date show that less than 20 p.c. of those who have taken these training courses have been subsequently charged with criminal offences.
- (7) The staff of school teachers has been more than doubled since 1947, libraries have been modernized and the supply of books, magazines, technical books and educational films greatly increased. Correspondence courses provided by the Department of Veterans Affairs and by the Provincial Departments of Education are available free of charge to all inmates who wish to take advantage of them.
- (8) A comprehensive program of recreational activities is in effect in all institutions, with facilities for softball, soccer, hockey, boxing and other sports to be carried on in non-working hours. Hobbycraft activities are permitted in the cells, and prison magazines prepared and edited by inmate editorial boards are published at all institutions.
- (9) Hospitals have been modernized and supplied with much additional equipment, such as X-ray equipment, surgical appliances, and other modern aids to diagnosis and treatment.
- (10) Psychiatrists are now employed on the staff of six penitentiaries, and outside psychiatrists are consulted at the institutions where a staff psychiatrist is not available. At one institution there is a special psychiatric ward with a trained staff.
- (11) A thorough survey of the prison industrial shops was undertaken, shops were modernized, provided with proper lighting and facilities and hundreds of thousands of dollars worth of modern machinery. The value of industrial work produced in these shops increased from \$409,278 in 1946-47 to \$1,223,723 in 1955-56.
- (12) Remuneration for the prisoners has been increased from a flat rate of 5 cents per day to a graded scale of 12, 18 and 24 cents, based on individual rating for conduct, industry and progress towards rehabilitation. A portion of the money so earned is set aside for the day of release, with the balance available for spending in the institutional canteen for small comforts such as tobacco, sweets, soft drinks and toilet articles.
- (13) The recommendation of the Commission with regard to Prisoners' Aid Societies has been largely implemented by the formation of John Howard Societies or other similar associations in every province and in many localities in the individual provinces; these societies are assisted by grants from the Government of Canada.
- (14) The rules for the discipline of officers have been revised, and provide that no officer may be dismissed without being heard, and he must be advised of the reason for his dismissal.
- (15) All penitentiary kitchens have been modernized and supplied with the necessary mechanical equipment to meet approved culinary and sanitary requirements. A qualified official at Headquarters is employed to supervise and direct the operation of the kitchens.
- (16) An agricultural college graduate was appointed Supervisor of Farms and the farming operations have been greatly expanded. Dairy herds are maintained at all institutions except British Columbia and Collin's Bay, with pedigree stock and a high record of milk production. Most of the pork, eggs, and vegetables used in the penitentiaries are produced on the farms. Factories for the canning of fruit and vegetables are in operation at two institutions.

35.—Movement of Convicts in Penitentiaries, Years Ended Mar. 31, 1952-55

Item	1952	1953	1954	1955
	No.	No.	No.	No.
In Custody, Apr. 1.	4,817	4,686¹	4,934	5,120
Received—				
From gaols.....	1,847	2,136	2,434	2,378
By transfer.....	323	970	827	708
By cancellation of ticket-of-leave.....	12	13	14	10
Totals, Received.....	2,182	3,119	3,275	3,096
Discharged by—				
Expiry of sentence.....	1,554	1,463	1,810	1,456
Transfer.....	322	972	826	708
Ticket-of-leave.....	373	384	384	449
Deportation.....	—	5	—	—
Death.....	24	11	21	16
Pardon.....	25	21	36	66
Release to military authorities.....	1	—	—	—
Release on order of court.....	13	15	12	9
Return to provincial authorities.....	—	—	—	—
Instructions from Immigration Department.....	—	—	—	—
Other reason.....	—	—	—	5
Totals, Discharged.....	2,312	2,871	3,089	2,709
In Custody, Mar. 31.	4,687	4,934	5,120	5,507

¹ This figure shows one inmate fewer than at Mar. 31, 1952. Sentence of one inmate was annulled by court order during year ended Mar. 31, 1952, but notification was not received by the penitentiary until the following fiscal year.

36.—Summary Statistics re Convicts in Penitentiaries as at Mar. 31, 1952-55

Item	1952	1953	1954	1955
	No.	No.	No.	No.
Place of Birth—				
Canada.....	4,272	4,554	4,712	5,123
British Isles and possessions.....	121	116	138	134
Austria and Hungary.....	20	14	14	13
Italy.....	9	9	9	7
Poland.....	33	38	29	33
U.S.S.R.....	53	30	24	24
Other Europe.....	63	66	84	67
United States.....	95	91	90	99
Other countries.....	21	16	20	7
Marital Status—				
Single.....	2,776	2,955	3,017	3,357
Married.....	1,575	1,607	1,592	1,603
Widowed.....	133	132	132	143
Divorced.....	84	132	131	130
Separated.....	119	108	248	274
Sex—				
Male.....	4,562	4,829	5,025	5,412
Female.....	125	105	95	95
Age—				
Under 21 years.....	485	564	639	694
21 to 29 “.....	2,091	2,151	2,192	2,299
30 to 39 “.....	1,245	1,293	1,364	1,467
40 to 49 “.....	543	572	597	701
50 to 59 “.....	212	239	213	232
Over 60 “.....	111	115	115	114
Totals	4,687	4,934	5,120	5,507

The Ticket-of-Leave System.—The parole system in Canada is legalized under the Ticket-of-Leave Act (R.S.C. 1952, c. 264) administered by the Minister of Justice. It is described in detail in the 1948-49 Year Book, pp. 305-308.

Subsection 2.—Reformatories and Other Corrective Institutions

As of June 1, 1951, there were 13 reformatory and corrective institutions, four of which were for women. Enumeration cards were completed for 2,551 men and 141 women on June 1, 1951. In these institutions for adults 29 p.c. of the inmates were under 21 years of age at the time of admission and almost 50 p.c. were between the ages of 21 and 39 years. The proportion of single men was 63 p.c. and three out of four of the men whose residence was known lived in urban centres. More than one-half of the women (53.2 p.c.) were single and the majority (91.0 p.c.) of those whose residence was known lived in urban centres. From five to eight years of elementary school education were recorded for about one-half of the male and female inmates. Only 6.7 p.c. of the men were unemployed at the time of admission. On the other hand 20.6 p.c. of the women were unemployed and another 34.0 p.c. had never worked.

The revenue for the support of the institutions for men was derived chiefly from provincial funds (56.0 p.c.) and from the sale by the institutions of farm and industrial products (41.3 p.c.). To support the institutions for women, income was received from provincial funds (31.0 p.c.), municipalities (1.8 p.c.), sale of products (53.4 p.c.), donations and bequests (4.6 p.c.) and other sources (9.2 p.c.).

Summary statistics of inmates, movement of population, terms of sentence and penal record of inmates are given in the 1954 Year Book, pp. 311-313.

Subsection 3.—Training Schools

Reports on movement of population are received yearly from training schools and figures compiled therefrom are shown in Table 37 for the years 1952 to 1955.

37.—Movement of Population in Training Schools, Years Ended Mar. 31, 1952-55

Item	1952	1953	1954	1955
	No.	No.	No.	No.
Training Schools for Boys—				
Pupils in residence at beginning of year.....	1,668	1,802	1,833	1,977
Admitted during the year.....	1,597	1,695	1,811	2,079
Discharged during the year.....	1,463	1,664	1,667	1,988
In residence at end of year.....	1,802	1,833	1,977	2,068
Training Schools for Girls—				
Pupils in residence at beginning of year.....	674	753	859	928 ¹
Admitted during the year.....	608	808	781	767
Discharged during the year.....	529	702	705	774
In residence at end of year.....	753	859	935	921
Totals—				
Pupils in residence at beginning of year.....	2,342	2,555	2,692	2,905
Admitted during the year.....	2,205	2,503	2,592	2,846
Discharged during the year.....	1,992	2,366	2,372	2,762
In residence at end of year.....	2,555	2,692	2,912	2,989

¹ The discrepancy between pupils in residence end of year 1954 and those in residence at beginning of year 1955 comes from the inclusion in Home of the Good Shepherd, Saint John, N.B., of seven adults.

More detailed information on training schools is collected at each decennial census. Statistics compiled from the Census of 1951 are summarized in the 1954 Year Book, pp. 314-316.

CHAPTER VIII.—EDUCATION AND RESEARCH

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

PART I.—FORMAL EDUCATION*

Section 1.—Education in the Provinces and Territories

"In and for each Province the Legislature may exclusively make Laws in relation to Education..." In these words the British North America Act of 1867 makes constitutional provision for the control of Canada's schools.

With certain exceptions, which are mentioned below, each provincial public school system is administered by a Department of Education, headed by an elected Minister who is a member of the provincial Cabinet and operated under the direction of a Deputy Minister who is a civil servant. In accordance with the school laws of the province, the Department of Education determines curricula for the elementary and secondary schools, is responsible for the certification of teachers, and supervises and provides central services for the schools. Local boards of school trustees, usually elected, arrange for the construction and maintenance of school buildings and employ the teachers. Their funds come chiefly from local property taxes and provincial grants.

In addition to these public elementary and secondary school systems there are private elementary and secondary schools, institutions (for the most part governmental) for the education of exceptional children, vocational training institutions controlled by a variety of provincial government departments and by non-governmental bodies, public and private universities and colleges, and adult education agencies under the control of governments and voluntary associations.

* Prepared in the Education Division, Dominion Bureau of Statistics.

Although there are variations from province to province, and within provinces, the usual pattern of education is an eleven- to thirteen-grade system of elementary and high schools, one- to three-year courses in trade schools and technical institutes at the secondary level, post-secondary teachers' colleges with one- to four-year programs of training, and universities offering three-year and longer courses in the arts and sciences and the professions. Agencies of adult education, both formal and informal, provide short- and long-term programs of study.

Characteristic of education at all levels and in most regions are: (1) rapidly increasing enrolments; (2) active school building programs, never quite catching up with the demand for facilities; (3) a shortage of teachers—despite increased salaries, recruitment from the United Kingdom, and emergency short-course training schemes; and (4) mounting expenditures. The attention being given to the education of exceptional children in recent years is worthy of special note.

The following paragraphs indicate the ways in which the several provincial systems differ from the pattern outlined above, together with mention of institutions and practices of special interest and of significant recent developments in education.

Newfoundland.—Newfoundland might be said to have a public denominational school system. The Deputy Minister is assisted by four Superintendents of Education, one for each of the four main religious denominations—Anglican, Roman Catholic, Salvation Army and United Church. The Minister of Education, the Deputy Minister and the four Superintendents form a Council of Education which makes educational policy and co-ordinates the various parts of the system. One curriculum serves the schools of all denominations and teachers receive common training in the Memorial University of Newfoundland, a provincial institution.

Each denomination builds and maintains its own schools, with financial assistance from the Provincial Government. The salaries of almost all teachers are paid directly by the Province according to a provincial scale. Until recently no provision had been made for local taxation, but in 1954 legislation was passed which provided that any area might be declared taxable for school purposes. By 1955 only one area had been so declared.

Some children are admitted to school at the age of five in what is called a "pre-grade 1" class. Elementary education includes grades 1 to 8 and secondary education grades 9 to 11. Most schools teach both elementary and secondary grades. The high school curriculum is academic, leading to university entrance after grade 11. In some schools in St. John's, grade 12 studies are offered (they follow the Nova Scotia grade 12 program of studies and the pupils write Nova Scotia examinations) and a post-grade 11 commercial course is taught. An active school building program in the Province includes, for the first time, regional high schools. Few private schools are operated in Newfoundland.

Trade training is offered in the St. John's Vocational Training Institute. A provincial university to which is affiliated a theological college (Queen's) is located in St. John's. The Division of Adult Education of the Department of Education sponsors programs in both urban and rural centres.

Prince Edward Island.—Except in Charlottetown and the incorporated towns, the school boards are the only local governing authorities, and therefore collect the school tax. Teachers' salaries are provided by the Provincial Government, supplemented by the local school board.

Kindergarten classes are available in a few urban schools. The elementary school curriculum comprises grades 1 to 8 and high school grades are 9 to 12, grade 12 being the junior matriculation grade. The majority of the Island's schools are of one room and it is common for rural schools to teach grades 1 to 10, with grades 11 and 12 available in the larger centres. One junior high school has been established recently. There are a few private Roman Catholic schools in the Province.

Trade training is given in the Provincial Vocational School and two private business colleges provide commercial courses. The Government operates the Prince of Wales College and Normal School in Charlottetown, offering junior college and teacher-training courses, and both high school and university programs are available at St. Dunstan's College (Roman Catholic). A Director of Adult Education on the staff of the Department of Education organizes programs throughout the Province.

Nova Scotia.—The public school curriculum of Nova Scotia is in three divisions: elementary school (primary grade and grades 1 to 6), junior high school (grades 7 to 9) and senior high school (grades 10 to 12). The junior matriculation level is reached at the end of grade 11 and the senior matriculation level at the end of grade 12. Senior high schools provide commercial courses as well as a general academic course.

In recent years, numbers of rural and regional high schools, commonly offering grades 7 to 12, have been created to provide secondary school facilities outside the urban centres. The number of pupils studying by correspondence, though a relatively small proportion of the total, has increased in recent years because of the shortage of qualified teachers. There are about a score of private elementary and secondary schools in the Province, almost all of them Roman Catholic.

On Jan. 1, 1956, significant legislation gave effect to recommendations of a Royal Commission on Public School Finance in Nova Scotia. It was designed to establish a "foundation program" in all public elementary and secondary schools, to make more equitable the basis of taxation for school purposes and to distribute provincial support in relation to need.

Vocational training is provided under the auspices of the Department of Education in two county vocational high schools, in evening vocational classes in more than 40 centres, by correspondence courses, and in eight coal-mining schools, a land survey school, a marine navigation school, a marine engineering school, and a college of art. The Department of Labour operates three Canadian Vocational Training Centres. The Nova Scotia College of Agriculture, operated under the Department of Agriculture, gives short courses in agriculture. Fisheries schools are operated by the Department of Trade and Industry. In 1955 there were seven private business colleges and nine private correspondence schools registered under the Trade Schools Regulations Act, which is administered by the Department of Education.

Until 1955, elementary school teachers were trained only in the Nova Scotia Normal College and secondary school teachers in the universities. Since that year, however, Acadia University, Dalhousie University, Mount Allison University and St. Francis Xavier University provide teacher-training to students who have completed two or three years of college studies, as well as to those who have university degrees, thus preparing teachers for the elementary and junior high schools.

Nova Scotia has 14 institutions of higher education: Acadia University, Collège Sainte-Anne, Convent of the Sacred Heart (junior college), Dalhousie University, University of King's College, Maritime College of Pharmacy, Pine Hill Divinity Hall, Holy Heart Seminary, Maritime School of Social Work, Mount Saint Vincent College, Nova Scotia Agricultural College (junior college), Nova Scotia Technical College, St. Francis Xavier University (including Mount Saint Bernard College and Xavier Junior College), and St. Mary's University.

With the assistance of the Adult Education Division of the Department of Education, there is a province-wide program for adults which includes folk schools, evening classes, short courses and cultural services, with special emphasis on economic development. A number of the universities offer extension services.

New Brunswick.—New Brunswick has a 12-grade public school system: elementary school (grades 1 to 8) and high school (grades 9 to 12). Grade 12 is the junior matriculation grade. In two urban high schools a thirteenth grade is taught which follows

the program of studies of the first-year course at the University of New Brunswick, whose examinations the pupils write. There are somewhat fewer than twenty private academic schools in the Province, most of them Roman Catholic.

In recent years facilities for secondary education have been increased by the construction of regional and rural high schools. In many of these and in urban composite high schools, there are several choices of curricula—academic, commercial, industrial, home economics and agriculture.

Vocational education is provided also in two vocational schools, in the New Brunswick Technical Institute at Moncton, in evening classes in many centres, in the Maritime Forest Ranger School, in four agricultural schools (two operated by the Department of Agriculture and two by the Department of Education), and in private business colleges of which there are about half a dozen.

Elementary school teachers are trained in the New Brunswick Teachers' College and in the normal school of the Université Saint-Joseph. In addition, there are normal school courses for men and women in six Roman Catholic educational institutions. Secondary school teachers are trained in five universities, and for industrial-course teachers there is a training program at the New Brunswick Technical Institute. A recent development in teacher education was the establishment in 1955, at the University of New Brunswick and at least one other university, of a course leading, in three years beyond the year at Teachers' College, to a Bachelor of Elementary Education degree.

New Brunswick has six universities and colleges: Mount Allison University, University of New Brunswick, Université de Sacré-Coeur, Université Saint-Joseph (including Collège de l'Assomption and Collège Notre-Dame d'Acadie), Université Saint-Louis (including Collège Maillet), and St. Thomas College.

Quebec.—In Quebec, education is represented in the provincial Cabinet by the Provincial Secretary rather than by a Minister of Education. Public elementary and secondary schools are controlled by a Council of Education which is made up of two committees—one supervising Catholic education and the other supervising Protestant education. The Department of Education is headed by a Superintendent and two Deputy Ministers—one for Catholic and the other for Protestant schools—and Catholic and Protestant school systems exist side by side, each relatively independent of the other.

Private or independent schools play a much more prominent role in Quebec than in other provinces. Chief among these are the classical colleges, which number nearly a hundred. Affiliated to the French-language universities (Laval, Montreal and Sherbrooke), they offer an eight-year course, entered after completion of elementary school and leading in two four-year stages, secondary and college, to the baccalaureate degree.

The French public school curriculum was recently revised to the English pattern. In other words, a seven-year elementary school and a four- or five-year secondary school was substituted for a three-stage primary school (elementary, 1 to 7; complementary, 8 and 9; superior, 10 to 12). A classical course has also been introduced in the public secondary school, equivalent to the first four years of the classical college curriculum. The junior matriculation level in both Catholic and Protestant schools is at the end of the eleventh year.

Public vocational education is highly developed in Quebec, chiefly under the Department of Social Welfare and Youth which operates a network of arts and trades schools, technical schools, and institutes. Teacher training, too, has undergone radical revision within the past few years. The normal schools raised the entrance requirement to completion of the eleventh year, instituted one-, two- and four-year courses, and related their programs to university requirements so that a degree in pedagogy may be earned in the four-year course.

In addition to the three French-language universities mentioned above, there is a Canadian Services College—Collège Militaire Royal de Saint-Jean—and three English-language institutions of higher education: McGill University (including Macdonald College), Sir George Williams College and Bishop's University.

Adult education forms part of the program of a host of governmental and voluntary bodies, many of the latter receiving support from the Province.

Ontario.—Ontario has a thirteen-grade public school program, the junior matriculation level being reached at the end of grade 12, and senior matriculation at the end of grade 13. Commonly, elementary schools comprise grades 1 to 8, but some teach up to grade 10 and many have kindergarten classes (for four-year-olds) and kindergarten-primary classes (for five-year-olds). Secondary schools include grades 9 to 13, offering several curricula: general (academic), art, commercial, home economics and industrial.

Elementary schools under control of the Department of Education may be public or separate, all but three of the latter being Roman Catholic. A considerable number of the Roman Catholic separate schools in French-language communities are bilingual and are staffed by teachers trained in both French and English. Secondary schools under departmental control are all public and are of five main types: collegiate institutes, high schools, continuation schools, vocational schools and composite schools. A relatively small number of pupils attend private schools, most of which are inspected by the Department of Education and the students at which are prepared for Departmental certificates.

Most vocational education at the secondary level is provided in the public secondary schools, although there is a Provincial Institute of Trades (in Toronto), and there are two agricultural schools under the Department of Agriculture, many private business colleges and a number of private trade schools. The Department of Education also operates four technical institutes with most courses at the post-secondary level.

Teachers for the elementary schools are trained at teachers' colleges operated by the Department of Education, in a one-year course following completion of grade 13 or a two-year course following grade 12. Secondary school teachers receive a one-year period of training at the Ontario College of Education, University of Toronto, after university graduation. Vocational school teachers are also trained at the Ontario College of Education.

In addition to a number of independent junior colleges and professional training schools, the Province has nine institutions of higher learning: University of Ottawa, Queen's University, Royal Military College, University of Toronto, McMaster University, University of Western Ontario, Assumption University of Windsor, Carleton University and Collège du Sacré-Coeur. All but the last two have federated or affiliated colleges.

A Community Programmes Branch of the Department of Education provides assistance to informal adult education and recreation programs, public secondary schools sponsor night classes, the universities offer extension services and many voluntary agencies operate in the field of adult education.

Manitoba.—The curriculum of Manitoba's public schools is organized in three stages: elementary (kindergarten and grades 1 to 6), junior high school (grades 7 to 9) and senior high school (grades 10 to 12). The junior matriculation level is reached at the end of grade 11, and the senior at the end of grade 12. In the larger centres there are schools of these three types while in rural areas most or all of the grades are often taught in one school. There has been little consolidation in Manitoba and many small schools still exist.

In the city of Winnipeg one of the eight senior high schools is vocational. There are composite high schools in other centres, and vocational as well as academic courses are available in a number of schools. No provision is made for separate schools in the public system but there are private or parochial schools which are inspected by officials of the Department of Education.

In addition to the vocational courses provided in the senior high schools, the Department of Education operates a trade school (Manitoba Technical Institute) in Winnipeg, and the Department of Agriculture has an Agriculture and Home-making School in Brandon.

Elementary school teachers are trained at the Provincial Normal School, Tuxedo, and at the Normal School of Brandon College—in a one-year course following grade 12. Secondary school teachers are prepared by the University of Manitoba and by Brandon College in a post-graduation year. Summer courses at the Manitoba Technical Institute are provided for the training of vocational instructors.

Higher education is provided by the University of Manitoba, with which are affiliated Brandon College, the Manitoba Law School, Collège de Saint-Boniface, St. John's College, St. Paul's College and United College, and by the Grand Séminaire de Saint-Boniface an affiliate of the University of Montreal. Direction of the provincial adult education program and the University of Manitoba's extension services is fused in the office of the Director of University Extension and Adult Education. Agricultural extension is under the Department of Agriculture.

Saskatchewan.—The Saskatchewan school curriculum is divided into two stages: elementary (kindergarten and grades 1 to 8) and high school (grades 9 to 12). The senior matriculation level is at the end of grade 12 and there is no leaving certificate awarded at the junior matriculation level (end of grade 11). Both public and separate (chiefly Roman Catholic) schools are under the control of the provincial Department of Education which also inspects all private elementary and most private secondary schools.

Three technical schools and an increasing number of composite high schools are included in the provincial system. A Canadian Vocational Training centre is located in Saskatoon. A government correspondence school serves a growing number of students, offering courses at all grade levels and in vocational subjects. Consolidation of school districts is proceeding in Saskatchewan but there are still many small rural schools in operation. Special attention was given to the problems of rural schooling by a provincial Royal Commission on Agriculture and Rural Life whose report on *Rural Education* was published in 1956.

The elementary school teachers of Saskatchewan are trained in a one-year course, following grade 12, at two Saskatchewan Teachers' Colleges (Moose Jaw and Saskatoon), or at the College of Education of the University of Saskatchewan which also trains secondary school teachers. A recent move to relate more closely the teachers' colleges and the University made it possible for graduates of the former to gain a year's credit for their training when entering the University for the four-year Bachelor of Education course.

The University of Saskatchewan (including Regina College) and its ten affiliated colleges dominate the higher educational scene, but there are also two independent Roman Catholic theological seminaries and four colleges affiliated with the University of Ottawa.

There is an active Adult Education Division in the Department of Education and a flourishing program of rural extension centred in the College of Agriculture of the University.

Alberta.—Like Saskatchewan, Alberta has a 12-grade system ending at the senior matriculation level, and divided into public and separate schools, with, in addition, departmental inspection of private schools. The curriculum is divided into three stages: elementary school (grades 1 to 6), junior high school (grades 7 to 9) and senior high school (grades 10 to 12). Because of crowding in the schools there has been no kindergarten in the public system since 1954, but private kindergartens do operate.

A major project was completed in 1954 when the Coterminus Boundary Commission submitted its final report. For most of the settled parts of the Province, the Commission's work resulted in identical boundaries for rural school and municipal administrative areas. Centralization of school facilities has been a significant aspect of school administration in recent years, resulting in improved facilities, better qualified teachers and greater retention of pupils in high school grades.

Vocational education is provided in public high schools, many of them of the composite type; in the Provincial Institute of Technology and Art at Calgary; at three Canadian Vocational Training centres—one for trade training, one for nursing aide training and one for commercial training; at three agricultural and home economics schools operated by the Department of Agriculture; and in private trade schools and business colleges.

All teacher training in Alberta is conducted by the University of Alberta at Edmonton and a branch of that institution at Calgary. Minimum training of elementary school teachers is given in a one-year course following grade 12 while secondary school teachers must have a university degree. Since 1954, Alberta, like a number of other provinces, has had an emergency teacher-training program consisting of summer courses with intervening periods of teaching during the school year.

Higher education is concentrated in the University of Alberta, including its Calgary branch and three affiliated colleges. There is an independent Roman Catholic seminary affiliated with the University of Ottawa, and also two independent junior colleges.

The University of Alberta's extension service is province-wide and the Department of Agriculture also conducts an active extension program.

British Columbia.—The basic divisions in the public school system of British Columbia are: elementary school (kindergarten and grades 1 to 6), junior high school (grades 7 to 9) and senior high school (grades 10 to 13). There are, however, several combination patterns, e.g., elementary-junior high school, elementary-senior high school, junior-senior high school. The junior matriculation level is reached at the end of grade 12 and the senior matriculation level at the end of grade 13. No provision is made for the public support of separate schools but there are private schools in the Province serving minority groups. Consolidation of schools has progressed far in British Columbia.

Public vocational schools include the Vancouver Technical School, Vocational Institute and the Vancouver School of Art, all at the secondary level, two provincial trade schools and a number of private trade schools and business colleges.

Until 1956 elementary school teachers were trained in two provincial normal schools and secondary school teachers in the University of British Columbia. In that year all teacher training was integrated in a College of Education created in the University.

The chief institution of higher education is the provincial University of British Columbia, to which are affiliated Victoria College (a junior college) and four theological schools, two of which are recent establishments. There are, in addition, a Canadian Services College at Royal Roads and Notre Dame College at Nelson which is a junior college affiliated to Gonzaga University, Spokane, Washington.

Under the jurisdiction of the provincial Department of Education there are night classes, vocational courses, correspondence courses and community program services for adults, and the University operates a province-wide system of extension services.

Yukon Territory.—The Government of Yukon Territory has its own Department of Education, headed by a Superintendent of Schools at Whitehorse. It operates 14 public schools and two Roman Catholic separate schools. In addition, under the jurisdiction of the Indian Affairs Branch of the Department of Citizenship and Immigration, there are four Indian schools in the Territory proper and another in nearby northern British Columbia.

Northwest Territories.—The Federal Department of Northern Affairs and National Resources operates schools in the Territories for Eskimos and Indians, often with the co-operation of the Anglican and Roman Catholic churches. On behalf of (and at the expense of) the Territorial Government it also operates schools for white and mixed-blood children and, in addition, is responsible for the education of Eskimos in northern Quebec.

Curricula in the schools of the Northwest Territories is adapted to the special needs and the way of life of the people. Recent innovations include provision for vocational training and the education of adults, and of correspondence courses for those unable to

receive classroom instruction. To accommodate the children of nomadic Eskimos and Indians, denominational hostels are being built at federal expense in certain of the centres in which there are federal day schools. They are then operated by the Anglican or Roman Catholic churches.

Federal Roles.—In addition to the responsibility of the Department of Northern Affairs and National Resources for education in the Northwest Territories, the Indian Affairs Branch of the Department of Citizenship and Immigration, in co-operation with the provinces, administers Indian schools throughout Canada; the Department of National Defence, also in co-operation with the provinces, operates schools on military stations in Canada and in Europe and operates three Canadian Services Colleges in Canada; the Department of Justice provides schooling in the penitentiaries; and the Department of Veterans Affairs has a program of education in veterans hospitals as well as correspondence courses for veterans, federal civil servants and inmates of penitentiaries. Vocational training in the provinces is assisted by the Training Branch of the Department of Labour.

Higher education is aided by federal grants to universities and by the provision of fellowship, scholarship, bursary and loan funds. Research grants are made by a number of departments and agencies of the Federal Government. In the field of adult education, the Federal Government's participation is through such channels as the newly created Canada Council for the Encouragement of the Arts, Letters, Humanities and Social Sciences, the Canadian Citizenship Branch of the Department of Citizenship and Immigration, the Canadian Broadcasting Corporation, the National Film Board, the National Museum and the National Gallery. These phases of education are dealt with in Part II of this Chapter, pp. 363-373.

Section 2.—Statistics of Schools, Universities and Colleges

Educational institutions in Canada are herein grouped under four captions: provincially controlled schools, privately controlled schools, universities and colleges, and federal schools in the Territories and for Indians. The first three groups are dealt with in this Section, while information on Indian schools, with the exception of enrolment figures shown in Table 2, is included with the general material on the Indians of Canada given in the Population Chapter, at pp. 146-149.

The provincially controlled schools, both public and separate, are most numerous and account for about 90 p.c. of the total enrolment shown in Table 2. These schools are financed essentially through direct taxes on property (the amount fixed by local school authorities) and provincial grants. In addition there is a much smaller number of private schools in all provinces (i.e., schools that are not conducted by publicly elected or publicly appointed boards and are not financed out of public money). At the higher education level considerable provincial support is given to the six provincial universities and one or more colleges in each of the other provinces and some provincial aid is given to most of the other 16 private universities and 163 colleges giving degree credit courses. In addition all degree-granting universities and colleges are eligible for grants from the Federal Government and these are paid to all except those in the Province of Quebec.

Agricultural colleges and schools, their location, courses offered and other pertinent information are listed in Chapter IX on Agriculture.

Direct control and operation of the public schools is in the hands of boards of school trustees which operate under provincial school law and whose members are elected or appointed usually for terms of two or three years. In most provinces in addition to the unit boards in charge of a single-room rural school, and village, town or city school systems, there are unit boards in charge of larger administrative units. These are usually formed of the rural and sometimes the urban schools in a county or inspectorate, the local boards often retaining ancillary functions. Table 1 gives the number of active boards by province whether these are in charge of local areas or larger units, the number of official trustees appointed in lieu of boards and the number of board members appointed and elected,

1.—Active School Boards and Official Trustees by Province 1953

Province	Unit Boards	Local Boards within Units	Independent Local Boards	Total Boards	Official Trustees ¹	Number of Trustees ²	
						Appointed	Elected
	No.	No.	No.	No.	No.	No.	No.
Newfoundland.....	—	—	308	308	—	1,850	—
Prince Edward Island.....	1	—	449	450	—	8	1,347
Nova Scotia.....	24	1,685	53	1,762	—	455	5,055
New Brunswick.....	14	735	78	827	2	596	2,381
Quebec—							
Roman Catholic.....	—	—	1,615	1,615	—	8	9,174
Protestant.....	9	61	209	279	—	24	9,223
Ontario.....	781	6	3,148	3,935	³	13,531	1,984
Manitoba.....	17	—	1,615	1,632	207	25	5,578
Saskatchewan.....	109	4,802	465	5,376	276	234	14,273
Alberta.....	59	3,918	138	4,115	—	—	12,622
British Columbia.....	81	—	5	86	16	31	536
Totals.....	1,095	11,207	8,083	20,385	501	16,762	62,173

¹ Usually the school inspector, delegated to act where a board cannot be elected.

² Estimated where

necessary. ³ Included with independent local boards.

Subsection 1.—Provincially Controlled Elementary and Secondary Schools*

Enrolment and Attendance.—At the elementary school level, enrolments have been increasing steadily in the postwar period and recent birth registrations and immigration figures indicate that this trend will continue.

Other factors responsible for increased enrolment include: the introduction of family allowances in 1945 which improved attendance and kept greater numbers of pupils in school to the minimum age limit; increased attention to guidance and other means of keeping pupils in school; greater appreciation of the importance of completing secondary education; increased transportation facilities provided at public expense; the erection of dormitories in certain provinces; adoption of larger units of administration and the establishment of junior high schools and of composite schools to serve rural areas particularly.

Enrolment in provincially controlled schools for the latest school year available is given in Table 2 and average daily attendance is shown in Table 3.

* Academic and vocational day schools only.

2.—Enrolment in Educational Institutions classified by Type of School and by Province, School Year 1953-54

Type of School	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	No.	No.	No.	No.	No.	No.
Provincially Controlled Schools—						
Ordinary and technical day schools.....	92,364	20,368	146,388	117,381	758,006	933,104
Evening schools.....	1,253	349	4,632	2,872	77,000	78,338
Correspondence schools.....	41	66	3,130	234	3,698	1,982
Special schools ¹	—	—	319	—	862	566
Teacher-training schools—						
Full-time ²	³	46	219	252	5,935	1,732
Accelerated courses ²	414	—	46	314	—	1,079
Privately Controlled Schools—						
Ordinary day schools.....	—	1,088	5,161	1,683	67,293	17,837
Business training schools—						
Day classes.....	—	81	470	471	6,553 ⁴	5,642
Evening classes.....	—	42	294	444	4,977 ⁴	6,013
Universities and Colleges—						
Preparatory courses.....	—	491	418	1,101	20,438 ⁵	3,168
Courses of university standard.....	911	242	4,934	2,925	29,418 ⁵	31,367
Other courses at university.....	—	43	374	812	18,580 ⁵	13,783
Indian schools and schools in the Territories.....	—	47	627	400	2,444	6,566
Totals.....	94,983	22,863	167,012	128,889	995,204	1,101,177
Population (June 1, 1954 estimate).....	395,000	101,000	673,000	540,000	4,388,000	5,115,000

For footnotes, see end of table, p. 352.

2.—Enrolment in Educational Institutions classified by Type of School and by Province, School Year 1953-54—concluded

Type of School	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.
Provincially Controlled Schools—						
Ordinary and technical day schools.....	146,619	170,415	201,420	210,744	—	2,796,809
Evening schools.....	5,863	5,638	6,525	19,999	—	202,439
Correspondence schools.....	898	1,681	4,397	6,801	—	22,928
Special schools ¹	28	165	—	156	—	2,096
Teacher-training schools—						
Full-time ²	437	586	³	510	—	9,717
Accelerated courses ²	369	—	133	—	—	2,355
Privately Controlled Schools—						
Ordinary day schools.....	7,238	3,006	4,412	7,889	—	115,607
Business training schools—						
Day classes.....	1,337	870	1,477	1,692	—	18,593
Evening classes.....	2,355	619	2,022	1,753	—	18,519
Universities and Colleges—						
Preparatory courses.....	994	1,321	790	—	—	28,721
Courses of university standard.....	5,625	6,041	5,403	7,914	—	94,780
Other courses at university.....	2,616	155	1,416	5,967	—	43,746
Indian schools and schools in the Territories.....	4,045	3,791	3,697	5,793	3,837	31,247
Totals.....	178,424	194,288	231,692	269,188	3,837	3,387,557
Population (June 1, 1954 estimate).....	823,000	873,000	1,057,000	1,295,000	27,000	15,287,000

¹ Schools for the blind and deaf; these are boarding schools and many of the pupils are from provinces other than the one in which the school is situated. ² Courses for elementary teachers only; those for secondary teachers are included in university enrolment. ³ Included in university enrolment. ⁴ Estimated.

⁵ Includes classical colleges.

3.—Average Daily Attendance in Provincially Controlled Schools by Province, School Years Ended 1945-54

NOTE.—Comparable figures for earlier years will be found in previous editions of the Year Book, beginning with the 1932 edition.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1945.....	...	12,984	93,831	70,746	523,741	571,625	100,971	135,336	130,095	107,599	1,746,928
1946.....	...	14,321	99,367	74,529	529,613	590,801	104,666	138,267	133,162	114,590	1,799,316
1947.....	...	14,850	102,099	78,129	533,765	597,400	103,739	135,038	131,011	121,334	1,817,365
1948.....	...	14,774	103,858	81,057	545,841 ¹	613,586	103,744	135,578	133,410	129,859	1,861,707 ¹
1949.....	59,520	14,727	107,914	82,168	566,544 ¹	638,733	105,240	135,872	136,690	138,941	1,986,349 ¹
1950.....	66,727	15,043	111,818	87,158	587,619 ¹	660,249	106,008	136,991	146,388	147,584	2,065,585 ¹
1951.....	67,638	15,310	114,285	84,923	605,955 ¹	674,901	112,749	137,606	150,013	154,077	2,117,457 ¹
1952.....	71,064	15,343	117,349	87,720	636,966 ¹	710,227	117,774	139,744	163,454	163,364	2,223,005 ¹
1953.....	77,040	16,212	126,650	95,771	671,165 ¹	775,319	124,514	142,190	173,954	176,138	2,378,953 ¹
1954.....	80,841	16,840	129,832	100,740	718,010 ¹	857,514	132,266	149,041	186,496	191,203	2,562,783 ¹

¹ Estimated.

Grade Level.—Pupils in the provincially controlled schools of all provinces are distributed by grade level in Table 4.

4.—Grade Level of Pupils Enrolled in Provincially Controlled Schools by Province, School Year 1953-54

Grade	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont. ¹	Man.	Sask.	Alta.	B.C.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Kindergarten.....	306	138	14,639	—	7,023	60,904	4,451	2,993	—	1,573
Grade 1.....	19,104	2,999	19,527	18,233	125,601	115,059	20,906	22,390	27,939	28,094
Grade 2.....	11,866	2,553	15,260	15,053	116,101	108,666	17,508	19,398	23,464	23,874
Grade 3.....	10,243	2,204	13,874	12,954	113,106	95,881	15,388	17,544	20,678	20,840
Grade 4.....	9,867	2,046	13,545	12,882	107,006	86,035	14,812	16,722	20,326	20,533
Grade 5.....	9,453	2,109	13,877	12,661	98,813	82,256	14,753	16,827	20,037	20,260
Grade 6.....	8,342	1,866	13,086	11,228	85,709	80,971	13,415	15,587	18,555	19,337
Grade 7.....	6,943	1,801	11,852	10,001	65,119	73,395	12,556	15,262	17,408	18,205
Grade 8.....	5,422	1,739	9,901	8,134	39,190	64,680	10,621	14,161	15,461	16,210
Grade 9.....	4,917	1,288	8,120	5,519	27,334	58,805	8,725	10,782	13,386	14,055
Grade 10.....	3,245	1,008	6,242	4,395	15,806	43,127	6,830	8,063	9,919	11,750
Grade 11.....	2,201	444 ²	4,224	2,926	9,656	26,634	4,858	5,924	7,902	8,572
Grade 12.....	47	173 ²	1,521	1,924	3,380	20,199	1,522	4,218	6,345	6,340
Grade 13.....	—	—	—	36	—	9,775	—	—	—	770
Junior Auxiliary.....	—	—	498	199	2,347	5,471	274	544	—	177
Senior Auxiliary.....	—	—	222	—	—	1,246	—	—	—	—
Special.....	408	—	—	476	8,841	—	—	—	—	154
Unclassified.....	—	—	—	760	267	—	—	—	—	—
Totals.....	92,364	20,368	146,388	117,381	825,299	933,104	146,619	170,415	201,420	210,744

¹ Province reports totals only for grades 1 to 3 and 4 to 6; numbers for individual grades are estimated.

² Includes 179 grade 11 students and 154 grade 12 students enrolled in Prince of Wales College.

Teaching Staffs.—In 1954-55 the teaching staffs of provincially controlled elementary and secondary schools consisted of 28,777 men and 79,264 women, a total of 108,041. Omitting Quebec, for which comparable data are not available, 38 p.c. of the teachers were in cities, 31 p.c. were in towns and villages, 20 p.c. were in one-room rural schools and the remaining 11 p.c. in schools of two or more rooms outside of urban centres. Again omitting Quebec where 36 p.c. of the teachers were members of religious orders, approximately 30 p.c. of the women teachers were married. Of the total number of teachers in the nine provinces (exclusive of Quebec), about 8 p.c. had received little or no training. At least 15 p.c. of the teachers leave the profession each year.

5.—Teachers in Provincially Controlled Schools classified according to Salary, by Province, School Year 1954-55

NOTE.—Comparable figures for Quebec are not available.

Salary	Nfld.	P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Below \$1.025.....	504	26	373	389	239	—	1	4	—
\$1.025 - 1.524.....	1,250	389	1,188	630	1,059	194	17	61	—
\$1.525 - 2.024.....	105	228	1,391	1,442	2,059	308	272	173	55
\$2.025 - 2.524.....	237	65	922	704	6,894	2,272	2,494	927	1,051
\$2.525 - 3.024.....	557	29	596	517	6,542	1,103	1,995	1,507	1,386
\$3.025 - 3.524.....	195	9	301	325	3,852	691	1,116	1,678	1,200
\$3.525 - 4.024.....	123	2	209	127	3,320	350	484	846	1,331
\$4.025 - 5.024.....	78	2	112	168	5,222	415	612	949	1,706
\$5.025 - 6.024.....	—	1	10	20	2,774	194	179	309	1,049
\$6.025 - 7.024.....	—	—	—	3	936	40	10	54	189
\$7.025 and over.....	—	—	—	—	162	5	1	1	48
Unspecified.....	—	—	—	—	—	1	—	1,205	13
Totals.....	3,049	751	5,102	4,385	33,059	5,573	7,181	7,714	8,028
Median salaries..... \$	1,407	1,494	1,874	1,926	3,005	2,530	2,818	3,096	3,646

Financial Support.—The public elementary and secondary schools are financed almost wholly from money derived from local taxation and provincial grants. Fees for elementary schooling may be charged in Quebec. In a few of the other provinces nominal fees are charged for the higher secondary grades; in Newfoundland there is little local taxation and fees are generally charged.

In general, school boards submit their budgets to the local municipal councils which levy for and collect the required amounts. However, school boards in Quebec and a few in other provinces have the power to levy and collect taxes for school purposes. Assessment, on which taxes for school purposes are levied, is the total valuation of land and buildings and sometimes improvements, personal property or business income are added in. Steps have been taken by several provinces to equalize real property assessment over large areas or even the whole province.

Each province has its own method of apportioning funds to local school boards. Grants are of two types. (1) The basic grant may be calculated on a minimum cost determined by an amount per classroom, salary and qualifications of the teacher, average attendance, etc. All provinces make some attempt to equalize educational opportunity through basing grants in part on some indication of need. (2) Special grants are paid to assist with transportation, music, arts and crafts, special classes, equipment, building costs, night classes, etc. They are largest in Quebec where there is marked emphasis on training for home industries, arts and crafts.

Newfoundland schools are largely supported from provincial funds. Tuition fees may be charged by school boards and by the boards of the colleges (actually schools of fairly high standard giving elementary and high school instruction) in the city of St. John's; and additional fees may be charged for fuel or janitor service where these are not provided by pupils or their families. There has been no local taxation until very recently and it now exists only in a few of the larger centres. The Province pays teachers according to experience and qualifications and some school boards supplement this amount. The Province also makes annual grants for plant maintenance and repairs and for new construction.

Table 6 presents a comparative statement of the finances of school boards operating provincially controlled schools in so far as this information is available.

6.—Income of School Boards of Publicly Controlled Elementary and Secondary Schools by Province, Fiscal Years Ended 1950-51

NOTE.—The receipts shown in this table do not include any amounts raised by loans or the sale of bonds or debentures as all revenue of this nature must be repaid ultimately with money raised by local taxation. Figures from 1914 are given in the corresponding table of previous Year Books beginning with the 1936 edition.

Province and Year	Income from—			Total Current Revenue Recorded	Debenture Indebtedness ¹
	Provincial Government Grants	Local Taxation	Other Sources		
	\$	\$	\$	\$	\$
Newfoundland.....1950	3,430,267	—	1,078,807 ^r	4,509,074 ^r	..
1951	3,557,275	—	1,090,408 ^r	4,647,683 ^r	..
1952	4,141,417 ^r	—	1,338,336	5,479,753 ^r	..
1953	4,839,522	—	1,630,213	6,469,735	..
1954	5,151,201	—	1,249,491	6,400,692	..
Prince Edward Island.....1950	570,908	488,714	62,020	1,121,642	..
1951	626,067	538,504	127,255	1,291,826	..
1952	641,328	600,546	71,619	1,313,493	..
1953	752,294	683,046	61,699	1,497,039	..
1954	797,779	703,018	57,942	1,558,739	..

¹ Net figures, after deduction of sinking funds.

6.—Income of School Boards of Publicly Controlled Elementary and Secondary Schools by Province, Fiscal Years Ended 1950-54—concluded

Province and Year	Income from—			Total Current Revenue Recorded	Debtenture Indebtedness ¹
	Provincial Government Grants	Local Taxation	Other Sources		
	\$	\$	\$	\$	\$
Nova Scotia.....1950	5,809,023 ^r	5,975,035 ^r	..	11,784,058 ^r	..
1951	5,598,544 ^r	6,226,050 ^r	..	11,824,594 ^r	..
1952	5,878,774 ^r	7,372,292 ^r	..	13,251,066 ^r	..
1953	6,961,281	8,561,063	208,892	15,731,236	..
1954	6,807,246	9,591,684	219,638	16,618,568	..
New Brunswick.....1950	4,803,316 ^r	6,660,199 ^r	..	11,463,515 ^r	..
1951	4,559,370 ^r	7,024,416 ^r	..	11,583,786 ^r	..
1952	4,636,609 ^r	7,615,277 ^r	..	12,251,886 ^r	..
1953	6,586,580	8,288,180	..	14,874,760	..
1954	6,904,003	9,382,336	726,423	17,012,762	..
Quebec.....1950	..	46,571,000 ^r	2,311,000 ^r	48,882,000 ^r	..
1951	15,910,137	50,579,638	2,479,097	68,968,872	54,138,073
1952	20,735,000	57,506,000	2,940,000	81,181,000	85,171,000
1953	25,004,000	64,879,000	3,448,000	93,431,000	108,894,155
1954	27,422,000	71,689,000	4,024,000	103,135,000	124,164,000
Ontario.....1950	42,661,144	73,195,577	2,906,755	118,763,476	108,830,392
1951	47,355,143	91,569,593	3,776,308	142,701,044	144,648,251
1952	53,968,946	105,621,372	4,067,919	163,658,237	176,872,294
1953	57,881,260	116,351,323	5,292,181	178,524,764	217,011,443
1954	67,017,621	134,283,382	4,855,351	206,156,354	259,228,426
Manitoba.....1950	4,086,810	12,875,011	343,165	17,304,986	10,265,632
1951	4,347,543	13,967,343	333,655	18,648,541	12,520,784
1952	4,925,118	15,672,552	334,946	20,930,616	13,780,605
1953	6,741,332	15,849,467	386,091	22,976,880	16,166,404
1954	8,302,904	17,761,570	438,125	26,502,599	19,688,526
Saskatchewan.....1950	6,919,369	16,372,024	476,227 ^r	23,767,620 ^r	5,212,399
1951	7,466,027	17,750,804	508,336 ^r	25,725,167 ^r	5,815,690
1952	8,721,620	21,063,694	660,625 ^r	30,445,939 ^r	7,063,834
1953	8,531,823	23,075,560	653,107	32,260,490	10,451,011
1954	10,285,634	23,284,137	794,671	34,364,442	11,889,601
Alberta.....1950	7,794,234	19,619,264	481,376	27,894,874	20,200,574
1951	9,717,503	21,879,905	775,068	32,372,473	26,971,892
1952	10,957,753	25,214,092	849,372	37,021,217	31,590,656
1953	12,834,292	28,135,523	909,212	41,879,027	39,949,274
1954	15,860,193	31,284,290	1,074,866	48,219,349	49,845,206
British Columbia.....1950	14,794,397	16,683,852	874,219	32,352,468	..
1951	18,168,218	22,295,568	1,392,793	41,856,579	..
1952	17,866,531	25,810,942	1,665,800	45,343,273	..
1953	15,754,155	30,340,880	1,414,574	47,509,609	..
1954	13,756,515	35,158,965	1,429,417	50,344,897	..

¹ Net figures, after deduction of sinking funds.

Subsection 2.—Private Elementary and Secondary Schools

Private schools include all those not operated by publicly elected or appointed boards. Except in Quebec, they receive no support from public funds. Instruction is similar to that given in public schools except that more tuition may be given in music, dramatics, art, etc., and in schools under religious control there is greater emphasis on religious instruction. In most provinces there is some form of inspection or regulation by the provincial Department of Education.

Of the 865 private schools reporting in 1953-54, 550 were in Quebec, 110 in Ontario, 130 in the Prairie Provinces, 41 in British Columbia and 34 in the Maritimes. There were 6,057 full-time teachers of whom 1,593 were men. Outside of Quebec the salaries for lay teachers in these schools ranged from \$1,000 to \$8,000 with a median of \$2,432.

Salaries of members of religious orders are omitted as they are usually only nominal. In 1953-54 there were 41,727 girls and 31,595 boys enrolled in the reporting private schools, about 63 p.c. of them in the elementary grades. At the secondary level there were 24,711 girls and 17,574 boys enrolled.

Private schools are financed largely from fees, legacies and gifts, or are supported through religious organizations. Annual fees vary widely—in 1953-54 (for eight provinces) 122 schools charged no fees or fees under \$50, three schools charged fees of \$500 or more for day pupils, nine boarding schools charged no fees or fees of less than \$50 and 13 other boarding schools had fees of \$1,000 and up. The average fee in 1953-54 was \$90 for day schools and \$450 for boarding schools. Expenditures of private schools in all provinces in that year amounted to over \$18,869,000 of which \$6,100,000 was paid out in teachers' salaries.

7.—Enrolment in Private Elementary and Secondary Schools by Province, School Years Ended 1945-54

NOTE.—Figures from 1921 will be found in the corresponding table of previous Year Books beginning with the 1937 edition. There is one small private school in Newfoundland.

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1945.....	754	3,913	2,843	61,828	15,911	4,593	3,544	2,032	5,704	101,122
1946.....	804	3,362	2,903	..	16,336	4,643	3,682	2,852	5,576	40,158 ¹
1947.....	803	3,109	2,841	..	15,694	4,125	3,721	2,507	5,195	37,995 ¹
1948.....	877	3,414	2,341	59,020	16,586	4,653	2,710	2,519	5,983	98,103
1949.....	951	3,894	2,504	60,000 ²	18,251	5,348	2,625	3,630	6,334	103,537 ²
1950.....	971	4,217	2,306	56,240	18,823	5,271	2,630	3,539	6,256	100,253
1951.....	969	4,709	2,129	55,667	20,141	6,226	3,138	3,527	6,170	102,676
1952.....	1,004	4,690	1,852	55,111 ²	18,573	6,564	2,842	3,447	6,531	100,614 ²
1953.....	1,029	4,990	1,650	60,395	18,100	6,749	2,886	3,515	7,072	106,386
1954.....	1,058	5,161	1,683	67,293	17,837	7,238	3,006	4,412	7,889	115,607

¹ Exclusive of Quebec.

² Estimated.

Business Colleges.—Of the 132 business schools reporting in 1953-54 in eight provinces (exclusive of Quebec and Newfoundland), 15 were in the Maritimes, 75 in Ontario, 25 in the Prairie Provinces and 17 in British Columbia. These employed 110 men and 277 women as full-time teachers and 29 men and 100 women as part-time teachers.

In these schools, girl students far outnumbered boys and the enrolment in evening classes was greater than that in the full-time day classes. The 1953-54 enrolments were: full-time day classes, 10,754 girls and 2,013 boys; correspondence courses, 601 girls and 174 boys. The total increased by 515 as compared with 1952-53. More than three-quarters of the full-time day students were from 16 to 19 years of age, inclusive.

Monthly fees ranged from \$9 to \$35 for day classes and from \$3 to \$15 for evening classes. Total operating expenditures for 1954 amounted to over \$2,886,000, of which \$1,308,000 went for teachers' salaries.

8.—Enrolment in Private Business and Commercial Schools (Business Colleges) by Province, School Years Ended 1945-54

NOTE.—Figures include day and evening classes. Those from 1921 will be found in the corresponding table of previous Year Books beginning with the 1937 edition.

Year	P.E.I.	N.S.	N.B.	Que. ¹	Ont.	Man.	Sask.	Alta.	B.C.	Total ¹
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1945.....	104	684	816	8,557	11,241	3,532	1,200	2,726	2,906	31,766
1946.....	181	1,080	805	9,659	14,642	4,099	1,568	3,481	4,021	39,536
1947.....	212	1,106	1,119	10,000	15,024	3,721	1,904	3,855	4,009	40,950
1948.....	227	1,011	958	10,000	13,917	3,493	1,533	3,731	3,674	38,544
1949.....	214	1,070	916	10,600	12,938	3,449	1,554	2,969	3,932	37,642
1950.....	185	1,053	1,099	11,100	11,999	3,648	1,662	2,700	4,356	37,802
1951.....	152	825	958	11,700	11,101	3,084	1,595	2,694	3,408	35,517
1952.....	156	861	868	12,300	11,800	3,595	1,540	3,211	3,737	38,068
1953.....	190	817	926	12,900	11,238	3,267	1,471	3,538	3,620	37,967
1954.....	123	764	915	13,500	11,655	3,692	1,489	3,499	3,445	39,082

¹ Estimated.

Subsection 3.—Universities and Colleges

Enrolment.—Total full-time university-grade enrolment in the regular winter session at Canadian universities and colleges totalled 63,041 in 1952-53, 64,140 in 1953-54 and 67,987 in 1954-55. The estimated figure for 1955-56 was 71,600 and for 1956-57 it was 78,100. Table 9 gives details of enrolment in 1953-54.

9.—Registration in Universities and Colleges by Province, Academic Year 1953-54

Province and Item	University-grade		Pre-matriculation	Others ¹	Total
	Under-graduate	Post-graduate			
	No.	No.	No.	No.	No.
Newfoundland—					
Full-time.....	421	—	—	—	421
Other.....	490	—	—	—	490
Prince Edward Island—					
Full-time.....	257	—	491	43	791
Other.....	4	—	—	—	4
Nova Scotia—					
Full-time.....	3,876	65	302	32	4,275
Other.....	973	20	116	342	1,451
New Brunswick—					
Full-time.....	1,990	54	1,087	59	3,190
Other.....	825	56	14	753	1,648
Quebec—					
Full-time.....	20,302	1,044	18,311	3,472	43,129
Other.....	7,572	500	2,127	15,108	25,307
Ontario—					
Full-time.....	19,037	1,384	3,025	447	23,893
Other.....	9,500	1,446	143	13,336	24,425
Manitoba—					
Full-time.....	4,014	71	750	350	5,185
Other.....	1,427	113	244	2,266	4,050
Saskatchewan—					
Full-time.....	2,421	58	1,321	155	3,955
Other.....	3,525	37	—	—	3,562
Alberta—					
Full-time.....	3,264	71	719	208	4,262
Other.....	1,988	80	71	1,208	3,347
British Columbia—					
Full-time.....	5,616	195	—	12	5,823
Other.....	1,729	374	—	5,955	8,058
Totals—					
Regular Session, Full-time.....	61,198	2,942	26,066	4,778	94,924
Regular Session, Part-time.....	5,088	1,757	182	2,857	9,884
Summer Schools and Extramural Courses..	22,945	869	2,533	36,111	62,458

¹ Includes enrolment in diploma and certificate courses not of degree credit.

In 1954-55 one of about every 18 full-time university-grade students in Canada was a resident of a country other than Canada. Foreign enrolment has risen considerably since the end of World War II, with a larger proportion of students from outside the United States and the United Kingdom coming to Canadian institutions. In 1954 and 1955 well over half of all foreign students were from other than these two countries, as shown in Table 10.

10.—Students from Other Countries in Canadian Universities and Canadian Students in Universities in the United States and the United Kingdom, Academic Years Ended 1921-55.

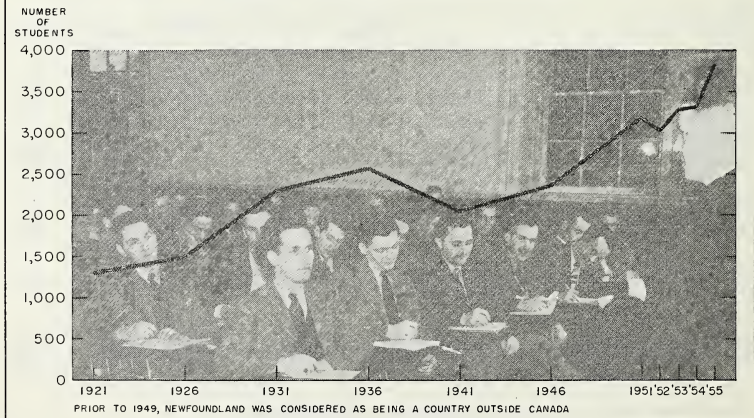
Year	Total Full-time University Enrolment in Canada	Students with Residence in—					Total Enrolment from Other Countries in Canada ¹	Canadians Studying in—	
		United States	United Kingdom	British West Indies	Newfoundland ¹	Other Countries		United States ²	United Kingdom ³
	No.	No.	No.	No.	No.	No.	No.	No.	No.
1921.....	23,139	..	..	..	..	..	1,306	..	..
1926.....	25,698	934	133	64	130	236	1,497	123	156
1931.....	32,926	1,506	333	54	175	236	2,304	1,313	212
1936.....	35,108	2,018	156	32	133	237	2,576	1,075	262
1941.....	36,319	1,478	41	74	174	289	2,056	1,458	..
1946.....	63,550	1,116	167	263	303	507	2,356	1,636	..
1951.....	68,306	1,758	164	252	...	1,014	3,188	4,528	372
1952.....	63,485	1,515	132	259	...	1,106	3,012	4,317	380
1953.....	63,041	1,676	150	284	...	1,179	3,289	4,637	390
1954.....	64,140	1,418	179	320	...	1,401	3,318	4,775	390
1955.....	67,987	1,540	179	472	...	1,662	3,853	4,655	372

¹ Before 1949 Newfoundland was considered as being a country outside Canada.

² Data from the Committee on Friendly Relations Among Foreign Students, New York, U.S.A.

³ Data from the Association of Universities of the British Commonwealth, London, England. Newfoundland is included with Canada for all years.

**NON-CANADIAN STUDENTS IN CANADIAN UNIVERSITIES
ACADEMIC YEAR ENDED 1921-55**



Graduates.—Awards made during the 1953-54 session included 12,083 bachelor and first professional degrees, 1,468 master and licence degrees, 242 earned doctorates, 249 honorary doctorates and 6,989 diplomas and certificates. For 1954-55 awards included 12,290 bachelor and first professional degrees, 1,438 master and licence degrees, 271 earned doctorates, 282 honorary doctorates and 7,218 diplomas and certificates. Table 11 shows figures for graduates in most faculties for three years.

11.—Graduates from Universities and Colleges, Academic Years Ended 1953-55

NOTE.—Figures for 1920-36 are given in the 1938 Year Book, pp. 993-997, and for 1937-52 in the corresponding tables of subsequent editions.

Field of Study	1952-53*		1953-54		1954-55	
	Total	Female	Total	Female	Total	Female
	No.	No.	No.	No.	No.	No.
Graduates in Arts, Pure Science and Commerce.	6,851	1,845	6,453	1,770	6,426	1,728
Bachelors of Arts ¹	5,360	1,671	5,101	1,608	4,976	1,554
Bachelors of Science (in Arts) ²	793	139	756	122	753	128
Bachelors of Commerce ³	698	35	596	40	697	46
Graduates in Applied Science.	1,547	5	1,438	6	1,512	1
Bachelors of Applied Science in Engineering....	1,337	2	1,252	1	1,337	1
Bachelors of Architecture ⁴	102	3	92	5	95	—
Bachelors of Forestry.....	106	—	93	—	75	—
Bachelors of Fisheries.....	2	—	1	—	5	—
Graduates in Agriculture, Veterinary Science and Household Science.	570	263	594	271	606	267
Bachelors of Agricultural Science.....	293	14	243	14	263	4
First Degrees in Veterinary Science.....	27	—	94	—	83	3
Bachelors of Household Science.....	250	249	257	257	260	260
Teacher Diplomas and Graduates in Education, Library Science, and Social Service.	1,777	483	1,963	554	2,100	573
Teacher diplomas (for secondary school teachers).....	827	—	797	—	868	—
First degrees in education or pedagogy.....	529	191	752	278	867	329
Librarian degrees and diplomas.....	113	102	105	83	83	65
Physical education first degrees and diplomas..	89	41	101	44	76	38
Social service degrees and diplomas.....	219	149	208	149	206	141
Graduates in Medicine and Related Studies.	2,205	795	1,986	600	2,225	800
Medical doctors.....	834	44	894	59	950	60
Dentists.....	219	5	169	5	174	3
Pharmacists.....	402	53	358	32	321	42
First degrees and graduate diplomas in nursing.	604	602	386	385	590	590
Physiotherapy and occupational therapy.....	90	90	115	115	104	104
Chiropractic.....	35	1	34	2	43	1
Optometry.....	21	—	30	2	43	—
Graduates in Law and Theology	1,165	59	1,264	73	1,319	78
First degrees and equivalent diplomas in Law..	586	28	627	31	624	21
Roman Catholic theological colleges.....	367	—	423	—	441	1
* Protestant theological colleges ⁵	212	31	214	42	254	56
Other First Degrees and Equivalent Diplomas	119	81	83	54	112	75
Bachelors of Fine and Applied Arts.....	17	12	13	10	16	11
Bachelors of Interior Design.....	15	13	14	11	9	6
Journalism.....	22	8	23	11	17	10
Bachelors of Music.....	65	48	33	22	70	48
Graduate and Honorary Degrees	2,109	347	2,161	366	2,385	473
Honorary doctorates.....	286	12	249	20	282	25
Doctorates in course.....	262	23	242	12	271	24
Masters of Arts ⁶	677	160	798	197	764	180
Masters of Science ⁷	376	23	376	26	374	30
Bachelors of Divinity.....	94	4	78	—	78	—
Licences (except in Theology) ⁸	197	34	185	32	223	56
Other graduate degrees and diplomas ⁹	217	91	233	79	393	158

¹ Includes Bachelors of Letters and Social Science.

² Some institutions include Science degrees in

Arts. ³ Includes Bachelors of Accounting and Secretarial Science. ⁴ Includes diplomas in Architecture

from the School of Fine Arts of Montreal. ⁵ Includes all diplomas and degrees except for Bachelors of Divinity.

⁶ Includes M.Com., M.Ed., M.Paed., M.S.W., as well as M.A. In some institutions, M.Sc. degrees are included with M.A.'s. ⁷ Includes M.A.Sc., M.S.A., M.Sc.F., M.Arch., M.V.Sc., M.Sc. Dent., M. Surgery (where

conferred separately), as well as M.Sc. ⁸ The "Licence" in the French-language universities is the next

degree in advance of the Bachelor. ⁹ Except diplomas for students in education and theology reported elsewhere.

Teaching Staff.—Table 12 shows the upward trend in university teaching staffs since 1921.

12.—Teaching Complement in Universities and Colleges, Academic Years Ended 1921-55

Year	Faculties of Arts and Science		Professional Schools		Totals ¹	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
	No.	No.	No.	No.	No.	No.
1921.....	1,191	242	942	1,179	2,133	1,352
1931.....	1,776	519	1,127	1,705	2,903	2,077
1941.....	2,037	579	1,707	2,420	3,452	2,185
1946.....	2,466	1,010	2,645	2,440	4,937	2,797
1947.....	2,814	1,002	3,078	2,478	5,246	3,441
1948.....	3,042	1,119	3,257	2,667	5,447	3,591
1949.....	2,871	1,202	3,051	2,755	5,339	3,887
1950.....	2,890	1,153	3,078	3,036	5,246	4,127
1951.....	3,126	1,260	2,557	2,826	5,539	3,902
1952.....	3,141	1,354	3,066	3,720	5,874	4,756
1953 [*]	3,447	1,406	3,006	4,118	6,047	5,055
1954.....	3,747	1,561	3,122	4,276	6,503	5,286
1955.....	3,852	1,405	3,274	4,383	6,781	5,101

¹ Excludes duplication.

Table 13 gives median salaries, by rank and region, for the staffs of 17 major institutions for selected years since 1937-38 when the statistical series was begun.

13.—Median Salaries of Teachers at 17 Universities and Colleges, Academic Years Ended 1938-57

NOTE.—Institutions include: *West*—Universities of Manitoba, Saskatchewan, Alberta, British Columbia; *Central*—Bishop's, McGill, Queen's, Toronto, Victoria, Trinity, McMaster, Western Ontario; *Maritimes*—Acadia, Dalhousie, St. Francis Xavier, Mount Allison, New Brunswick.

Rank and Region	1938 ¹	1943	1948	1953	1955	1957
	\$	\$	\$	\$	\$	\$
Deans.....	5,090	4,875	5,090+	7,633	8,659	9,706
West.....	5,000+	4,958	5,000+	7,633	8,607	9,700
Central.....	5,000+	5,000+	5,000+	8,875	9,625	11,750
Maritimes.....	3,350	2,833	3,875	4,916	6,000	6,667
Professors.....	4,258	4,484	5,090+	6,405	7,229	8,217
West.....	4,279	4,380	4,816	6,319	7,131	8,076
Central.....	4,492	4,744	5,000+	6,873	7,507	8,511
Maritimes.....	2,831	2,833	3,726	4,279	4,865	5,600 [*]
Associate Professors.....	3,427	3,488	4,118	5,269	5,930	6,343
West.....	3,333	3,375	3,960	5,259	5,945	6,303
Central.....	3,594	3,597	4,368	5,439	6,091	6,594
Maritimes.....	2,708	2,750	3,313	4,065	4,393	4,239
Assistant Professors.....	2,697	2,757	3,239	4,414	4,824	5,238
West.....	2,690	2,817	3,267	4,440	4,842	5,287
Central.....	2,757	2,735	3,548	4,513	4,911	5,363
Maritimes.....	2,150	2,313	2,651	3,692	3,816	4,476
Instructors and Lecturers.....	1,895¹	1,787	2,242	3,332	3,761	4,082
West.....	2,000	2,122	2,243	3,525	3,955	4,236
Central.....	1,802 ¹	1,777	2,192	3,350	3,823	4,069
Maritimes.....	²	²	1,846	2,500	2,417	3,421
All Staff.....	3,001¹	3,009	3,454	4,838	5,386	5,874
West.....	3,257	3,264	3,398	4,959	5,488	5,993
Central.....	2,801 ¹	3,101	3,696	5,023	5,643	6,135
Maritimes.....	2,690	2,188	2,722	3,726	3,859	4,619
Staff Complement.....	1,577	1,701	2,626	2,514	2,739	2,979

¹ In 1937-38 one institution reported 383 instructors and lecturers earning less than \$1,000. As a corresponding number were not reported in later years, many of these were presumed to be either part-time or below the rank of instructor or lecturer; the median was calculated without these persons.

² Less than \$1,000.

Finances.—Since 1952, grants from federal, provincial and municipal governments to a group of institutions representing about 80 p.c. of the total full-time university-grade enrolments have exceeded half of the total current income, less ancillary enterprises. Table 14 gives a historical series of the finances of this group of institutions. The institutions omitted are mainly those conducted by religious orders where teachers receive little or no salary and the financial returns are consequently not comparable.

14.—Current Income and Expenditure and Capital Resources of Universities and Colleges, Academic Years Ended 1921-54

Year	Current Income					Total Current Expenditure ²	Capital Resources		
	Endowments and Investments	Government Grants	Student Fees ¹	Miscellaneous	Total ¹		Land, Buildings and Equipment	Endowments	Trust Funds
	\$'000	\$'000	\$'000	\$'000	\$'000		\$'000	\$'000	\$'000
1921.....	1,497	4,522	1,826	1,244	9,089	8,975	48,124	28,328	2
1931.....	2,258	6,925	3,323	1,455	13,961	14,436	82,403	48,459	2
1941.....	2,046	6,804	5,143	2,054	16,047	16,156	95,680	55,082	17,422
1946.....	2,397	10,485	9,779	3,153	25,815	25,358	102,627	56,975	28,999
1947.....	2,314	13,768	13,636	3,203	32,921	32,889	112,409	59,208	34,397
1948.....	2,387	14,863	14,903	4,689	36,842	36,664	123,248	63,724	42,302
1949.....	2,568	16,218	15,959	4,845	39,590	39,197	139,779	69,012	43,093
1950.....	2,950	16,959	15,409	5,140	40,458	40,687	150,178	84,410	37,821
1951.....	3,127	18,733	14,025	4,647	40,532	40,792	162,372	82,702	34,686
1952.....	3,185	25,284	14,544	5,208	48,221	47,195	181,393	81,737	37,507
1953 [*]	2,979	26,554	14,260	6,675	50,468	50,116	191,920	82,502	38,503
1954.....	3,517	30,918	15,901	6,421	56,757	55,856	198,316	94,000	44,166

¹ Board and lodging not included.

² Included with "Endowments".

The Federal Government established a system of university grants for current operating purposes, the first of which were paid during the academic year ended 1952. The grants were paid on the basis of 50 cents per head of population in each province, the eligible institutions receiving their shares of the total provincial allotment according to the number of full-time students at university level attending degree or graduate diploma courses. For 1956-57 the payment was increased to \$1 per head of population. The distribution of payments, by province, is shown in Table 15.

15.—Federal Government Grants to Universities by Province, Academic Years Ended 1952-57¹

Province and Year		Institutions	Eligible Enrolment	Total Grants Paid ¹	Grant per Eligible Student
		No.	No.	\$	\$
Newfoundland.....	1952	1	374	180,700	483.15
	1953	1	407	187,000	459.46
	1954	1	401	191,500	477.56
	1955	1	505	199,000	394.06
	1956	1	576	206,000	357.64
	1957	1	740	415,074	560.91
Prince Edward Island.....	1952	2	267	49,200	184.27
	1953	2	251	51,500	205.18
	1954	2	253	53,000	209.49
	1955	2	245	52,500	214.29
	1956	2	260	54,000	207.69
	1957	2	310	99,285	320.27

For footnotes, see end of table, p. 362.

15.—Federal Government Grants to Universities by Province, Academic Years Ended 1952-57¹—concluded

Province and Year	Institutions	Eligible Enrolment	Total Grants Paid ¹	Grant per Eligible Student
	No.	No.	\$	\$
Nova Scotia.....	1952 13	3,475	321,250	92.45
	1953 13	3,430	326,500	95.19
	1954 13	3,696	331,500	89.69
	1955 12	3,948	336,500	85.23
	1956 12	4,224	341,500	80.85
	1957 12	4,470	694,717	155.42
New Brunswick.....	1952 6	1,893	257,800	136.19
	1953 6	1,815	263,000	144.90
	1954 6	2,014	268,000	133.07
	1955 6	2,231	273,500	122.59
	1956 6	2,483	279,000	112.36
	1957 6	2,775	554,616	199.86
Quebec ²	1952 5	19,273	2,027,800	105.21
	1957 6	23,898	4,628,378	193.67
Ontario.....	1952 27	18,203	2,298,750	126.28
	1953 27	17,593	2,388,000	135.45
	1954 27	16,939	2,448,500	144.55
	1955 27	17,896	2,523,000	140.98
	1956 27	18,801	2,591,500	137.84
	1957 29	20,723	5,404,933	260.82
Manitoba.....	1952 7	3,932	388,250	98.74
	1953 7	3,953	399,000	100.94
	1954 7	4,051	404,500	99.85
	1955 7	4,171	414,000	99.26
	1956 7	4,180	424,500	101.56
	1957 8	4,430	850,040	191.88
Saskatchewan.....	1952 14	2,301	415,850	180.73
	1953 14	2,314	421,500	182.15
	1954 14	2,424	430,500	177.60
	1955 14	2,684	439,000	163.56
	1956 14	2,925	444,500	151.97
	1957 14	3,327	880,665	264.70
Alberta.....	1952 4	2,844	469,750	165.17
	1953 5	2,937	485,000	165.13
	1954 4	3,171	501,000	157.99
	1955 4	3,297	519,500	157.57
	1956 4	3,558	533,000	149.80
	1957 4	3,873	1,123,116	296.89
British Columbia.....	1952 4	5,664	582,600	102.86
	1953 4	5,457	599,000	109.77
	1954 5	5,616	615,000	109.51
	1955 5	6,005	633,000	105.41
	1956 5	6,563	652,500	99.42
	1957 5	7,930	1,398,464	176.35
Totals^{1,2}.....	1952 83	58,226	6,991,950	120.08
	1953 79	38,157	5,115,500	134.06
	1954 79	38,565	5,243,500	135.97
	1955 78	40,982	5,390,000	131.52
	1956 78	43,570	5,526,500	126.84
	1957 87	72,476	16,049,288	221.44

¹ The grant from 1951-52 to 1955-56 was 50 cents per head of population in each province; for 1956-57 it was \$1 per head of population.

² Institutions in Quebec accepted payment only in 1951-52, refusing from 1952-53 to 1955-56. For 1956-57, payments refused will be held in trust by the National Conference of Canadian Universities until the institutions see fit to accept them.

During the 1956-57 academic year, plans were announced by the Federal Government for the distribution of \$50,000,000 to Canadian universities and colleges for new construction and capital equipment projects. The grants will be made in an amount not exceeding

50 p.c. of the cost of specific building or capital equipment projects, with appropriate regard to the population of each province. The University Capital Grants Fund will be administered by the Canada Council, which came into existence on Mar. 28, 1957, when an Act for the establishment of a Canada Council for the Encouragement of the Arts, Humanities and Social Sciences in Canada was given Royal Assent. The Council, first proposed in the Massey Report of 1951, was also endowed with an additional \$50,000,000 for the provision of scholarships and other assistance in the fields of the arts, humanities and social sciences.

PART II.—CULTURAL ACTIVITIES RELATED TO EDUCATION*

Section 1.—Art and Education†

Fine Art Schools, Galleries and Museums.—Fine art appears as an elective subject of the faculty of arts in a number of universities, where it may be taken as one of five subjects for a year or two; in some, e.g., Acadia University, N.S., there are six or more elective courses. In Mount Allison University, N.B., and in the Universities of Saskatchewan and Manitoba, there is a sufficient number of courses to allow the taking of a Bachelor degree with specialization in fine art. At the University of Toronto, Ont., an Honour B.A. in art and archæology is offered, as well as graduate work in this field. Departments of fine art were opened by McGill University in 1948-49, by the University of British Columbia in 1949-50 and by the University of Alberta in 1953-54; McMaster University reopened its department in 1951.

There are also schools of art not requiring any fixed academic standing for admission, as they are more concerned with the technical development of the artist. The most widely known of these are:—

Nova Scotia College of Art, Halifax, N.S.

École des Beaux-Arts, Quebec, Que.

École des Beaux-Arts, Montreal, Que.

School of Art and Design, Montreal Museum of Fine Arts, Montreal, Que.

Ontario College of Art, Toronto, Ont.

University of Manitoba School of Art, Winnipeg, Man.

Provincial Institute of Technology and Art, Banff School of Fine Arts,
Banff, Alta. (affiliated with the University of Alberta) Calgary, Alta.

Vancouver School of Art, Vancouver, B.C.

Courses in these schools vary in length with the requirements of the individual student but may extend over as many as four years. Summer schools of art are sponsored by some of the foregoing institutions, by universities, and by various independent groups.

Public art galleries and museums in the principal cities perform valuable educational services among adults and children. Children's Saturday classes, conducted tours for school pupils and adults, radio talks, lectures and often concerts are features of the programs of the various galleries. Many of these institutions supply their surrounding areas with travelling exhibitions, and organizations such as the Maritime Art Association, the Western Canada Art Circuit, the Saskatchewan Arts Board and the Art Institute of Ontario, have been founded to carry on the work on a regional basis. The National Gallery of Canada has a nationwide program of this nature.

* An outline of the *Report of the Royal Commission on National Development in the Arts, Letters and Sciences*, which was tabled in Parliament on June 1, 1951, is given in the 1952-53 Year Book, pp. 342-345. Available from the Queen's Printer, Ottawa.

† Revised under the direction of Alan Jarvis, Director, National Gallery of Canada, Ottawa.

The principal art galleries and museums* are:—

New Brunswick Museum, Saint John, N.B.
 Museum of the Province of Quebec, Quebec, Que.
 Montreal Museum of Fine Arts, Montreal, Que.
 National Gallery of Canada, Ottawa, Ont.
 London Public Library and Art Museum, London, Ont.
 Art Gallery of Toronto, Toronto, Ont.
 Royal Ontario Museum of Archæology, Toronto, Ont.
 Art Gallery of Hamilton, Hamilton, Ont.
 Willistead Library and Art Gallery, Windsor, Ont.
 Winnipeg Art Gallery, Winnipeg, Man.
 Regina College Gallery, Regina, Sask.
 Edmonton Museum of Arts, Edmonton, Alta.
 Vancouver Art Gallery, Vancouver, B.C.
 Arts Centre of Greater Victoria, Victoria, B.C.

Other Art Organizations.—The leading art organizations of national scope, exclusive of museums and art galleries, include the following:—

Association of Canadian Industrial Designers
 Canadian Arts Council†
 Canadian Group of Painters
 Canadian Guild of Potters
 Canadian Handicrafts Guild
 Canadian Museums Association‡
 Canadian Society of Graphic Arts
 Canadian Society of Painter-Etchers and Engravers
 Canadian Society of Painters in Water Colour
 Canadian Society of Landscape Architects and Townplanners
 Community Planning Association of Canada
 Federation of Canadian Artists
 Royal Canadian Academy of Arts
 Royal Architectural Institute of Canada
 Sculptors Society of Canada.

The National Gallery of Canada.—Founded in 1880 by the Marquis of Lorne, the National Gallery at first served only as an exhibition gallery. Provided with an Advisory Arts Council in 1907, and first incorporated under a Board of Trustees in 1913, it has assembled a permanent collection mainly during the past 40 years. This collection of pictures and sculpture, prints and drawings, representing the styles, past and present, of various parts of the world, was assembled for public enjoyment, study, and the improvement of arts and industrial products, and as the necessary basis of a program of art education. The National Gallery Act, amended in 1951, gives the institution a larger Board of Trustees and other advantages.

The collection of the National Gallery today is of international repute and is accessible to the whole country by means of catalogues, photographs, colour reproductions and, to a limited extent, by loans. The Canadian section, naturally the most inclusive, is the best available source for the study of Canadian art. Each year, examples of the best contemporary work are added, along with those of earlier periods.

The National Gallery conducts a program of extension work throughout the country. The majority of exhibitions are available to the entire country and are widely circulated. About 30 such exhibitions are toured and as many as 200 separate showings have been held annually under the auspices of the National Gallery of Canada. In addition individual loans of material from the collection are made to centres in many parts of the country each year. In this way original works of art are constantly being brought to the attention of the public. Sets of reproductions are also sent on tour of localities that have not the facilities for handling originals.

* A complete list of Canadian art museums, societies and schools is included in the Canadian section of the current issue of the *American Art Directory* (R. R. Bowker Co., New York).

† An account of the Canadian Arts Council and a list of its constituent bodies appears in the 1951 Year Book, p. 308.

‡ Formed in 1947 with the object of improving the services of museums as educational institutions by promoting co-operation among themselves, by exchange with other countries and by the training and securing of expert staffs.

An Industrial Design Division has been set up as the result of public interest in bringing the design of Canadian goods up to the best international standards and in fostering distinctive Canadian designs and a number of exhibitions on Canadian industrial art have been held in various parts of the country. The Design Centre in the Daly Building, Ottawa, serves as an exhibition centre and as headquarters for the national program in industrial design sponsored by the National Gallery.

Other methods of education in the arts apply more specifically to young people and are designed, in part, to supplement regular school work. The Gallery provides written lectures illustrated by lantern slides on all aspects of art history, reproductions of paintings with introductory texts for art appreciation, school broadcasts, classes for school children at the Gallery, exhibitions of children's art, conducted tours of the Gallery's collections and educational demonstrations. Lecture tours by well known authorities are also held throughout Canada.

The National Gallery also maintains a library of art films. These as well as the facsimile colour reproductions and silk screen prints published by the National Gallery are listed in the free leaflet, *Reproductions, Publications and Educational Material*. In connection with the CBC school broadcasts on Canadian artists, the National Gallery distributes small colour reproductions to school children in all parts of the country. The magazine *Canadian Art*, in the publication of which the National Gallery has taken a leading part, is widely distributed.

The *Report of the Royal Commission on National Development in the Arts, Letters and Sciences* made recommendations for the extension and improvement of the Gallery's exhibition and education services; increases in funds, staff and facilities; maintenance or increase of appropriations for acquisitions; and a new building containing adequate facilities for display, storage, circulation of exhibitions and conservation of paintings. Many of these recommendations are being carried out and new quarters, to be known as the Lorne Building, are now under construction.

Further details concerning recent purchases, exhibitions and lecture tours arranged by the National Gallery are contained in the *Annual Report of the Board of Trustees*.

Section 2.—The Educational and Cultural Functions of the National Film Board*

The National Film Board, an agency of the Federal Government, was established by Act of Parliament in 1939 and reconstituted by the National Film Act in 1950. In the years since its establishment the Board has grown from a supervisory body over Canadian Government motion picture activities to a national documentary film producing and distributing organization whose films about Canada are seen wherever people may freely assemble. The Board also produces and distributes filmstrips and still photos on Canadian themes in accordance with its primary function outlined in the Act "to initiate and promote the production and distribution of films in the national interest".

Films and filmstrips are being more widely employed as adjuncts to formal teaching in schools and universities. In the fiscal year 1956-57 there were 105,970 showings in schools and universities of films made or distributed by the National Film Board. Films produced by the Board are also shown in commercial theatres and on television in Canada and abroad. Items particularly designed for theatre use include the *Canada Carries On* and *Eye Witness* series in English (*En Avant Canada* and *Coup d'Oeil* in French) as well as newsreel features. Distribution of these usually is arranged through the major film distributing organizations, whose facilities are world-wide.

An increasing proportion of the Board's productions are being shown by television in Canada and abroad. A weekly series, *Perspective* (*Panoramique* in French) is televised nationally by CBC-TV, and local TV stations have constant recourse to individual films from the Board's general production. Abroad the principal televising of the Board's films takes place in the United States.

* Prepared, under the direction of the Government Film Commissioner, in the Information and Promotion Division, National Film Board, Montreal, Que.

The non-theatre program in Canada is based on a nation-wide system of film circuits, film councils and libraries and is deeply rooted in community activities. In the year ended Mar. 31, 1957, no less than 474 film councils—voluntary groups promoting wider use of documentary films—were in existence and 460 film libraries and depots assisted in the circulation of thousands of prints.

Canada's story on film is also being told abroad. In addition to commercial distribution through theatres and television, non-commercial circulation is carried on through posts of the Departments of External Affairs and Trade and Commerce, through National Film Board offices in London, England, New York and Chicago in the United States and New Delhi in India, as well as through libraries operated by various educational agencies. Hundreds of prints of National Film Board films are also sold in other countries each year. Exchange agreements are in effect between the Board and government film-producing organizations in other lands; this means that films of various nations are freely exchanged with Canada, aiding better international understanding.

The National Film Board maintains a library of more than 100,000 still photographs, which are available to magazines, newspapers and other periodicals wishing to present current information about Canada.

Section 3.—The Educational and Cultural Functions of the Canadian Broadcasting Corporation*

Many hours of educational or semi-educational programs are broadcast annually by the Canadian Broadcasting Corporation in the English and the French languages. Whether these programs are directed to children or adults, entertainment is combined with information whenever possible. Spoken-word programs cover a very wide range of interests and are presented as readings, talks, discussions, documentary programs, dramatizations or in forms combined with music.

Pre-school Broadcasts.—Though many story programs for pre-school-age children are broadcast purely as entertainment, a special series has been developed to give young children, particularly in remote areas, many of the benefits of kindergarten training. This series, *Kindergarten of the Air*, is broadcast Monday to Friday for children from three and a half to six years of age. Planned with the advice of kindergarten experts and representatives of the Canadian Home and School Federation, the Federation of Women's Institutes and the Junior League, it includes stories, songs, simple games, keeping-fit exercises, information about animal life and nature study, and encourages good habits of hygiene, eating and relaxation. The program is intended primarily for home listening but has been found useful in many organized kindergarten groups and classes.

School Broadcasts.—In an average school year, more than 1,000 school programs, mostly in dramatized form, are broadcast to all parts of Canada. The CBC provides facilities for thirty-minute daily programs specifically planned by Departments of Education to meet classroom requirements. These supplementary aids help teachers to stimulate student imagination and strengthen motives for study. The National School Broadcasts series are planned by the National Advisory Council on School Broadcasting to promote among students a stronger consciousness of Canada and its achievements. During the 1956-57 season, seven such series were planned for students from Grade 4 to senior high school. These were: *Voices of the Wild*, on Canadian wildlife; *Look to the North*, a series to give students a wider, up-to-date knowledge of Canada's increasingly important Arctic region; *They Explored Canada*, a series dramatizing outstanding events in Canadian history; *Hamlet*, a full-length performance of the Shakespearean drama; *Commonwealth Roundup*, comprising four programs on interesting aspects of other Commonwealth nations with specially recorded effects contributed by the broadcasting organizations in the United

* Prepared under the direction of J. A. Quimet, General Manager, Canadian Broadcasting Corporation, Ottawa. Other aspects of CBC services are outlined in Chapter XX.

Kingdom, Australia, South Africa and India; *Canadian Legends*, a series of five broadcasts in which a new approach to music appreciation was used—a composer, Peter Tchaikovsky, tells about his life with particular emphasis on the music of his three ballets, *The Swan Lake*, *The Sleeping Beauty* and *The Nutcracker*.

The first experimental television programs for school use were presented during November 1954, and a second series in April 1956. The second series consisted of fifteen telecasts planned to provide a visual supplement to classroom studies in social studies, language, science and art. They were divided into three grade levels—2 to 4, 5 and 6, and 7 to 10. They were presented in an early afternoon period and carried over a network of 29 CBC and privately owned stations. Teachers were supplied in advance with a manual giving instruction on how to use the telecasts. Approximately 1,850 classes with 62,500 students, covering all ten provinces, viewed the second series. In the report on their evaluation published by the CBC under the title *School Television in Canada*, the National Advisory Council on School Broadcasting concluded that “television has definite value as a teaching aid in the school classroom”; that the programs should be closely correlated with the curriculum; and that further experiments should be undertaken at the provincial level.

Adult Education.—Programs of an adult education nature are presented frequently by the CBC on its radio and television services. In the planning of these programs co-operation is received from various educational organizations. The CBC is an active participant in the work of the Joint Planning Commission, a body established by the Canadian Association for Adult Education for exchange of information and co-ordination of plans for adult education in Canada.

Radio Programs.—*Citizens' Forum*, which has been telecast for the past two years, is a round-table program on which a panel of informed speakers who hold varying viewpoints discuss important issues of the day. It is arranged jointly by the Canadian Association for Adult Education and the CBC. Its French counterpart, *Les idées en marche*, which is carried on television as well as radio, is planned in co-operation with La Société Canadienne d'Éducation des Adultes. Similar types of programs prepared specially for rural listeners are *National Farm Radio Forum* and *Le choc des idées*, arranged by CBC in co-operation with the Canadian Federation of Agriculture and the Canadian Association for Adult Education. All these forum programs are heard by organized listening groups, which continue the discussion of the topic at the conclusion of the broadcast.

For the past six summers the evening sessions of the Couchiching Conference have been broadcast. This week-long conference, organized jointly with the Canadian Institute on Public Affairs, examines Canadian and international affairs in open meetings and group discussions. Other programs of an educational nature are *Cross Section*, a series of radio documentaries dealing with economic and social questions; various dramatized series in the field of human relations and mental health; *Science Review*, which examines important discoveries in the field of the natural sciences and their branches; *Business and Labour Review*, designed to inform listeners of developments in Canada's economic life; *Anthology*, a literary program with emphasis on Canadian writers; and *Trans-Canada Matinée*, a daily afternoon program including informative talks and commentaries designed specially for the woman in the home. On the French network *Les voisins d'en face*, prepared in conjunction with L'École de Parents, presents a series of programs relating to parents and children; and general questions sent in by parents are answered by psychologists in the series *Le Courrier de radio-parents*. For women listeners, the daytime program *Fémina* is presented three times a week.

The French network also broadcasts a number of weekly programs dealing with fine arts, music, literature, theatrical arts, sciences, religion and philosophy, under the auspices of *Radio-College*. These broadcasts are not designed for classroom use, being of a more adult nature than the School Broadcasts on the English-language networks and scheduled, in the main, for other than school hours.

In addition, talks on a wide range of subjects including international affairs, Canadian history and community activities are broadcast regularly over the various networks.

Television Programs.—In addition to *Citizens' Forum*, programs which are carried regularly on both radio and television are *Press Conference*, in which people who make the news are questioned by those who report it; and *Fighting Words*, in which guest experts in various fields discuss controversial quotations sent in by viewers.

Open House, a daily program for women, presents information on a wide variety of commodities and services, and interviews with people of note. Important world news of the preceding week is discussed by a panel each Sunday night on *This Week*. *Explorations*, a series of drama documentaries which examines questions in the fields of sociology and the natural sciences, was one of seven CBC programs to win First Awards at the 1957 Exhibition of Educational Radio and Television Programs at Columbus, Ohio. Programs in the field of parent-education and mental health are also telecast.

Portions of the afternoon sessions of the Winter Conference of the Canadian Institute on Public Affairs were telecast. This three-day weekend conference examined sociological questions in open meetings and group discussions.

On the French network *C'est la vie* investigates various professions and callings; *Pays et merveilles* presents illustrated discussions of life in other countries; and *Profil d'adolescents* considers topics and problems of interest to teenagers.

Section 4.—The Canada Council

On Feb. 15, 1957, the House of Commons passed an Act for the Establishment of a Canada Council for the Encouragement of the Arts, Humanities and Social Sciences. The continuing objects of this body are to foster and promote the study and enjoyment of, and the production of works in, the arts, humanities and social sciences. The expression, "the arts" is defined by the Canada Council Act as: architecture, the arts of the theatre, literature, music, painting, sculpture, the graphic arts, and other similar creative and interpretative activities. The Council, in furtherance of its objects, may (a) assist, co-operate with and enlist the aid of organizations, the objects of which are similar to any of the objects of the Council; (b) provide a scheme of scholarships, fellowships and other grants to persons in Canada for study or research in the arts, humanities and social sciences in Canada or elsewhere, and to persons in other countries for study and research in the same subjects in Canada; (c) make awards to persons in Canada for outstanding accomplishment in the arts, humanities and social sciences; (d) arrange for and sponsor exhibitions, performances and publications of works in the arts, humanities and social sciences; (e) exchange with other organizations or persons and with other countries knowledge and information respecting the arts, humanities and social sciences; (f) arrange for representation and interpretation of Canadian arts, humanities and social sciences in other countries. In addition, the Canada Council may be assigned by the Governor in Council such functions and duties in relation to the United Nations Educational, Scientific and Cultural Organization (UNESCO) as he considers desirable.

The Council is a corporation consisting of a Chairman, a Vice-Chairman and nineteen other members, all appointed by the Governor in Council. The Chairman and Vice-Chairman are appointed for terms not exceeding five years and the other members for terms of three years each. After serving two terms, members of the Council, including the Chairman and Vice-Chairman, are not eligible for re-appointment during the twelve months following completion of the second term. The principal officers of the organization are the Director and the Associate Director, also appointed by the Governor in Council, the Treasurer and the Secretary. The Council is not an agent of the Crown, but its officers and employees are considered to be employed in the Public Service for the purposes of the Public Service Superannuation Act. The Council is deemed to be a charitable organization in Canada.

The continuing work of the Council will be financed by income from a permanent Endowment Fund of \$50,000,000 and by a University Capital Grants Fund of \$50,000,000, both to be paid out of the Consolidated Revenue Fund. The latter Fund and the income it earns will be completely expended by the Council over a specified term of years. This Fund will enable the Council to make grants to universities and other institutions of higher learning by way of capital assistance in respect of building projects, with the following limitations: (a) a grant for any one project may not exceed one-half the total expenditures made in respect of that project; (b) in any province the aggregate of the grants made may not exceed an amount that is in the same proportion to the aggregate amount credited to the University Capital Grants Fund as the population of the province (latest census) is to the aggregate population of the provinces in which there is a university or other similar institution of higher learning. The Canada Council is also permitted to expend and administer any gifts and bequests it may receive.

To aid and advise the Council in making, managing and disposing of investments under the Canada Council Act, an Investment Committee has been set up consisting of the Chairman of the Council, one other member of the Council designated by the Council, and three members appointed by the Governor in Council. Proceeds from the sale or other disposition of any investments made out of the Endowment Fund or the University Capital Grants Fund are credited to the Fund out of which the investment was made. Investments out of money standing to the credit of the University Capital Grants Fund are made only in bonds or other securities of, or guaranteed by, the Government of Canada.

The Governor in Council appoints a member of the Queen's Privy Council for Canada to whom at the end of each fiscal year the Chairman reports all proceedings under the Canada Council Act for that fiscal year, including the financial statements of the Council and the Auditor General's report thereon. Provision is made for a review of these reports by Parliament.

Section 5.—Library Services

The National Library.—The National Library of Canada, authorized by the National Library Act of June 18, 1952 (1 Elizabeth II, c. 330), came into existence formally on Jan. 1, 1953. The work formerly carried on by the Bibliographic Centre and the staff of the Centre were then absorbed by the National Library, which came under the administration of the Secretary of State.

The Act provides for the establishment of an Advisory Council consisting of 15 members, including at least one representative from each of the ten provinces; the appointment of a National Librarian, an Assistant Librarian and other personnel. Duties of the National Librarian include the establishment of a National Union Catalogue listing the books in every important collection in Canada; the purchasing of book stock; and the publication of a National Bibliography listing books published in Canada, written by Canadians, or of special interest to Canadians. The Act requires two copies of each book published in Canada to be supplied to the National Librarian within one month of the date of publication; one copy of expensive books must be deposited.

The site has been selected and working plans are being prepared for the National Library building at Ottawa. The acquisition of book stock is limited until permanent quarters are available but activities in other departments of the Library reflect noteworthy progress. The coverage of *Canadiana*, a bilingual monthly publication listing new Canadian publications, has been expanded to include those issued by all provincial governments. By Dec. 31, 1956, individual library catalogues representing about 7,000,000 volumes in 122 libraries had been microfilmed for the National Union Catalogue. In addition the library has assumed the duty of receiving, registering and acknowledging all books deposited under the terms of the Copyright Amendment Act.

Public Libraries.—Public library service in Canada includes main libraries and their branches in metropolitan areas—sometimes augmented by bookmobile service to outlying districts—small association libraries in villages and hamlets, regional service on a county or wider basis, and the use of boats and the mails to supply remote rural areas. Through these facilities, 75 p.c. to 80 p.c. of the population receive library service.

Preliminary statistics of public library operations for the year 1956 appear in Table 1. These cover the activities of 825 public libraries in Canada.

1.—Summary Statistics of Public Libraries by Province 1956

Province or Territory	Libraries	Volumes	Circulation	Borrowers	Full-Time Staff	Trained Staff ¹
	No.	No.	No.	No.	No.	No.
Newfoundland.....	2	206,961	609,963	51,071	32	6
Prince Edward Island.....	2	99,951	235,408	9,094	11	4
Nova Scotia.....	14	285,163	1,164,730	85,047	56	26
New Brunswick.....	11	143,015	285,417	22,443	21	3
Quebec.....	38	1,402,330	1,768,074	114,144	178	102
Ontario.....	490	5,176,940	20,302,493	1,163,224	1,086	337
Manitoba.....	17	261,228	1,440,622	61,701	80	18
Saskatchewan.....	73	445,051	1,382,752	82,982	93	24
Alberta.....	119	752,498	2,739,946	160,456	121	36
British Columbia.....	53	992,960	5,484,289	274,628	325	91
Northwest Territories.....	3	9,300	1,280	1,220	—	—
Yukon Territory.....	3	10,540	8,262	201	—	—
Totals.....	825	9,785,987	35,423,236	2,026,211	2,603	647

¹ Librarians with Bachelor of Library Science degrees.

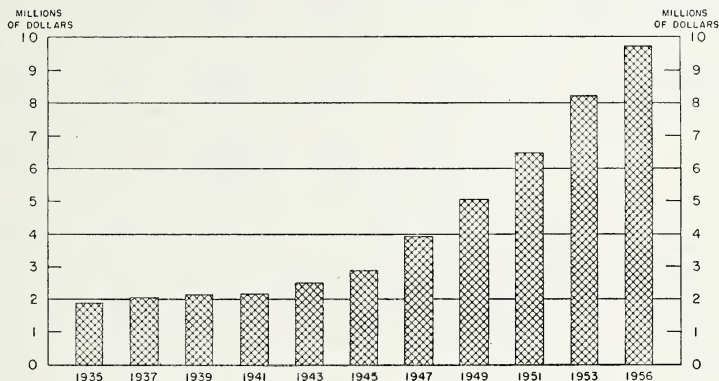
Of the 825 libraries surveyed in 1956, 101 were in cities of 10,000 population or over, and these employed the bulk of the full-time staff members of all public libraries. Median annual salaries in city libraries varied with the size of the city as follows:—

<i>Staff</i>	<i>Cities with Populations of—</i>		
	<i>10,000- 24,999</i>	<i>25,000- 99,999</i>	<i>100,000 Or over</i>
	\$	\$	\$
Chief librarian.....	3,771	4,929	6,750
Deputy chief librarian.....	3,583	4,333	5,250
Head of branch or division.....	3,400	3,868	4,212
Other librarians.....	3,083	3,292	3,569
Other professional staff.....	2,250	3,138	2,792
Library assistants.....	1,881	2,039	2,439
Clerical staff.....	1,500	2,063	2,149

In addition to the primary task of circulating reading material, public libraries undertake varied special services. City libraries in 1956 lent 104,235 films and 116,474 records, organized 166 art exhibits, presented 293 radio and drama shows and had 11,317 public film showings with total attendance of over 3,000,000 persons. About 4,741 story hours for children were presented, usually on Saturday mornings.

Regional Library Service.—Regional library service, or an adaptation thereof, now functions in Newfoundland, Prince Edward Island, Nova Scotia, Ontario, Saskatchewan, Alberta and British Columbia. In addition, the first regional library supervisor has been appointed in New Brunswick to organize a regional system originating in Moncton and designed eventually to provide library service for the counties of Westmorland, Albert and Kent. In February 1956, a program of provincial grants to regional libraries was announced in Manitoba and the Provincial Library is fostering regional library development in that Province.

OPERATING EXPENDITURES OF PUBLIC LIBRARIES FOR SPECIFIC CALENDAR YEARS



Summary statistics for the regional libraries in operation are given in Table 2.

2.—Summary Statistics of Libraries Organized for Regional Collaboration 1956

Regional Organization	Volumes	Circulation	Expenditure	
			Book Stock	Total
	No.	No.	\$	\$
Newfoundland Regional Libraries ¹	154,900	524,943	45,000 ²	143,883 ²
Prince Edward Island Libraries.....	92,950	194,481	10,015	37,000
Nova Scotia Regional Libraries—				
Annapolis Valley.....	28,291	148,913	6,386	30,084
Cape Breton.....	56,042	237,622	19,407	70,262
Colchester—East Hants.....	36,500	160,989	5,793	23,602
Pictou County.....	19,185	55,707 ³	5,118	24,216
Ontario County Library Co-operatives—				
Bruce.....	14,300	26,673	2,678	7,620
Elgin.....	20,292	35,765	4,373	13,501
Essex.....	21,916	25,822	6,124	22,106
Huron.....	25,878	44,867	6,161	19,777
Kent.....	16,914	26,886	3,886	20,238
Lambton.....	22,352	179,634	4,281	13,735
Middlesex.....	26,835	46,957	5,706	16,314
Oxford.....	16,607	181,035	3,967	14,378
Peel.....	10,376	..	3,535	10,518
Rainy River ⁴.....	..	..	..	..
Simcoe.....	19,350	107,779	5,105	14,924
Thunder Bay District.....	16,451	42,400	9,310	37,989
Victoria.....	9,242	55,618	2,629	10,176
Waterloo ⁵.....	..	..	..	8,000
Welland.....	19,268	185,000	..	..
Wentworth.....	21,453	187,422	6,949	30,475
Saskatchewan Regional Libraries—				
North-Central Saskatchewan.....	23,993	96,656	9,541	34,965

For footnotes, see end of table, p. 372.

2.—Summary Statistics of Libraries Organized for Regional Collaboration 1956—concluded

Regional Organization	Volumes	Circulation	Expenditure	
			Book Stock	Total
	No.	No.	\$	\$
Alberta Regional Libraries—				
Barrhead.....	9,550	28,760	4,007	7,077
Lacombe.....	23,000	80,000	8,643	31,766
British Columbia Regional Libraries—				
Fraser Valley.....	102,627	688,368	27,667	117,353
Okanagan.....	72,514	402,566	19,316	77,886
Vancouver Island.....	73,432	415,338	21,059	99,466
	Branch Libraries	School Deposits and Other Agencies	Population Served	Borrowers
	No.	No.	No.	No.
Newfoundland Regional Libraries ¹	40	325	150,000	40,000
Prince Edward Island Libraries.....	24	3	98,000	7,380
Nova Scotia Regional Libraries—				
Annapolis Valley.....	9	161	45,389	10,409
Cape Breton.....	9	131	116,000	23,312
Colchester—East Hants.....	5	169	43,656	..
Pictou County.....	..	146	40,000	15,514
Ontario County Library Co-operatives—				
Bruce.....	20	140	40,331	..
Elgin.....	13	205	35,865	11,125
Essex.....	11	73	106,071	..
Huron.....	33	231	47,403	..
Kent.....	10	202	63,000	..
Lambton.....	19	186	40,000	..
Middlesex.....	26	110	70,000	9,500
Oxford.....	18	160	63,181	14,976
Peel.....	15	68	..	..
Rainy River ⁴.....	..	..	..	..
Simcoe.....	18	212	112,409	..
Thunder Bay District.....	13	103	60,000	..
Victoria.....	10	102	18,000	..
Waterloo ⁵.....	..	..	48,604	..
Welland.....	..	..	..	..
Wentworth.....	5	105	70,055	..
Saskatchewan Regional Libraries—				
North-Central Saskatchewan.....	11	10	31,187	7,008
Alberta Regional Libraries—				
Barrhead.....	6	17	8,300	1,860
Lacombe.....	8	15	15,000	1,450
British Columbia Regional Libraries—				
Fraser Valley.....	12	308	173,733	46,544
Okanagan.....	56	62	72,477	25,029
Vancouver Island.....	21	224	77,477	13,698

¹ Includes figures for Newfoundland Travelling Library.

² Includes figures for Gosling, Regional, and Travelling Libraries.

³ Excludes juvenile libraries.

⁴ Service by contract with Thunder Bay District.

⁵ Organized in November 1956.

Academic Libraries.—The 1953 Survey of Libraries covered 263 academic libraries which contained about 7,630,000 volumes, employed 545 full-time and 615 part-time personnel. Of all the employees 290 were trained in library science.

Government Libraries.—The 102 Federal Government libraries covered by the 1953 Survey reported 2,067,430 volumes and the 99 provincial government libraries reported 1,389,516 volumes. The federal libraries employed 345 full-time staff and the provincial libraries 162.

Business, Professional and Technical Libraries.—The 131 libraries operated by business, professional and technical societies and establishments in 1953 reported 774,629 volumes in stock. Two-thirds of these libraries reported full-time staff numbering 253 persons.

Section 6.—Canada and the United Nations Educational, Scientific and Cultural Organization

In the words of its constitution, the purpose of the United Nations Educational, Scientific and Cultural Organization (UNESCO) is "to contribute to peace and security by promoting collaboration among the nations through education, science and culture in order to further universal respect for justice, for the rule of law, for human rights and fundamental freedoms".

Total membership in the Organization at the beginning of 1957 numbered 79 states. The structure of the Organization includes three principal organs: (a) the General Conference; (b) the Executive Board; and (c) the Secretariat. The General Conference is the policy-making body of the Organization. It meets every two years and its main functions are to consider applications for membership, elect the Executive Board, plan the program and approve the budget for the ensuing two-year period.

At the General Conference held in New Delhi, India, from Nov. 5 to Dec. 5, 1956, decision was reached to launch three major projects: the extension of primary education in Latin America; scientific research on arid lands; and mutual appreciation of the cultural values of the Occident and the Orient. The Conference approved a total budget of \$22,679,000 for the years 1957 and 1958 to be applied to common services and administrative expenses as well as to UNESCO's seven program areas—education, natural sciences, social sciences, cultural activities, mass communications, technical assistance and exchange of persons. Canada's share in this budget is \$685,485 or about 3 p.c. of the assessment level.

Both governmental and non-governmental organizations in Canada are interested in, and contribute to, UNESCO program activities. During the period under review, Canadians either as individuals or as organizations attended a number of UNESCO-sponsored meetings and seminars, contributed information to a variety of UNESCO publications and participated in UNESCO technical assistance missions and projects. Several UNESCO travelling art exhibitions toured Canada; International Museums Week was observed by museums and galleries across the country, and training programs were organized for Fellows from under-developed countries.

In the absence of a National Commission for UNESCO, the Department of External Affairs has carried out the essential liaison functions between the various official and voluntary agencies concerned with the Organization's program. However, pursuant to Sect. 8 of the Act passed at the Fifth Session of the Twenty-second Parliament for the establishment of a Canada Council for the Encouragement of the Arts, Humanities and Social Sciences, the Governor in Council assigned to the Canada Council certain functions in relation to UNESCO and the Canada Council, on Aug. 21, 1957, announced the establishment of a National Commission for UNESCO.

PART III.—SCIENTIFIC AND INDUSTRIAL RESEARCH

Section 1.—The National Research Council*

Forty years of scientific research on a national basis have made it possible for Canada to keep pace with the exploitation of its own vast resources as well as with the accelerated economic development noticeable in all parts of the world.

History and Organization.—Organized research in Canada on a national basis dates from 1916 when the Government of Canada established the Honorary Advisory Council for Scientific and Industrial Research under a Committee of the Privy Council. Provision was made for the planning and integration of research work, organization of co-operative investigations, postgraduate training of research workers, and prosecution of research through grants-in-aid to university professors. This was the basis of the Council's work from 1916 to 1924.

* Prepared by John R. Kohr, Public Relations Branch, National Research Council of Canada, Ottawa.

A Special Committee of Parliament, appointed to study a recommendation for establishing national laboratories, endorsed the proposal and the Research Council Act was revised by Parliament in 1924. Temporary laboratories were secured and research on utilization of magnesian limestones for refractories was carried out so successfully that a wartime industry, established during World War I, was re-established on a large scale. As a result of this achievement the Government, in 1929-30, provided funds for new laboratories.

The National Research Building on Sussex Drive, Ottawa, was opened in 1932; and in 1939 construction was begun of the aerodynamics building on a 130-acre site on the Montreal Road just east of the city. Later, other buildings were erected on this site, including woodworking and metalworking shops and separate laboratories for research on engines, gas and oil, hydraulics and structures. These facilities have since been enlarged and extended and new buildings have been provided for engineering, low-temperature studies, and high-speed aerodynamics. In 1952 a cosmic ray laboratory, a thermodynamics building, and a large structure to house the Division of Applied Chemistry were added; in 1953 a modern laboratory was constructed in one of the Montreal Road service tunnels for the exact measurement of surveyors' tapes and the Building Research Centre was completed. The same year development began on a new 250-acre site on the opposite side of the road, where the new headquarters for the Radio and Electrical Engineering Division was constructed. An underpass connects the two areas.

A Prairie Regional Laboratory built on the University of Saskatchewan campus has been in operation since June 1948 and an Atlantic Regional Laboratory, on the campus of Dalhousie University at Halifax, N.S., was opened in June 1952. The Division of Building Research has established one of the most northerly building research stations in the world at Norman Wells, N.W.T. Completing its long-term plan for regional activities, the Division has also established a small Pacific Regional Station at Vancouver, in co-operation with the British Columbia Research Council.

The National Research Council consists of the President, two Vice-Presidents (Scientific), one Vice-President (Administration) and 17 other members, each of the latter group being appointed for a term of three years and chosen to represent industry, labour or research in one of the basic natural sciences. Many of the members are drawn from the science departments of Canadian universities.

The Council's scientific and engineering activities are organized in nine divisions and two regional laboratories, each with its own director. Five laboratory divisions are concerned with fundamental and applied studies in the natural sciences: applied biology, applied and pure chemistry, and applied and pure physics. Three others are devoted chiefly to engineering work—building research, mechanical engineering, which includes aeronautics and hydraulics, and radio and electrical engineering. The Division of Medical Research has no laboratories but awards grants-in-aid and fellowships tenable chiefly in the medical schools of Canadian universities.

Links with Industry.—In addition to its basic research functions, the Council operates a Technical Information Service. Through a trained research staff, using the extensive library facilities available to the Council, it is usually possible to provide any required information at very short notice. A free and constant flow of personnel and information is maintained between the Council laboratories and industrial laboratories, the aim being to have Canadian industry use the Council's laboratories just as the units of a large company use their own laboratories as a source of scientific information and assistance. The Council also undertakes for any firm, under contract, research problems that cannot be solved by private consulting and testing laboratories and, in return, obtains assistance from many companies. The Council has long-standing and intimate contacts of this co-operative kind with many Canadian industries in various fields.

Associate committees were established by the National Research Council early in its history and have been continued to date. Hundreds of specialists have accepted invitations from the Council to serve on committees and have brought their knowledge and experience

to bear on the solution of research problems put before them. Members of committees give their time and effort to these special studies without charge and their assistance is a source of great strength to the Council.

Foundation Aspects.—Assisted research grants have been made by the Council since its inception in 1916. These awards are given to heads of university science departments to purchase needed equipment and to employ junior helpers, usually students. Aid of this kind has been of considerable assistance in enabling the universities to put into operation the excellent graduate schools that now exist in Canada. In 1956-57 more than \$3,500,000 was provided out of Council funds for basic research at Canadian universities.

Scholarships and grants in aid of research are awarded annually by the National Research Council. Scholarships awarded in science and engineering include Bursaries and Studentships which have values of \$800 and \$1,200 respectively for the academic year, to which a summer supplement of \$800 may be added. In addition, Special Scholarships valued at \$2,000 a year and Postdoctorate Overseas Fellowships at \$2,700 (single) and \$3,500 (married) are offered. The Council also offers Graduate Medical Research Fellowships valued at from \$2,000 to \$5,000, depending upon academic qualifications and research experience. A limited number of Medical Research Associates are also appointed to research positions in the medical schools of Canadian universities. Graduate Dental Research Fellowships are also available. In 1956-57, 310 different awards were made, totalling \$450,450.

Since 1948, the National Research Council has awarded Postdoctorate Fellowships, in open competition to Canadians and nationals of other countries, which are tenable in the Council's own laboratories. The diversity of training and experience brought to the laboratories by these keen young scientists has had such a stimulating effect on the research effort that the program has been further expanded in recent years; Fellowships are now tenable in science departments of Canadian universities and in the laboratories of other Federal Government Departments, such as Agriculture, Mines and Technical Surveys, and National Health and Welfare. Almost 200 of these awards are being held at the present time, mostly in the fields of chemistry, physics and biology.

Principal Activities in 1956-57*

The activities of each Division are described in outline only, with occasional brief examples. The work of the Atlantic and Prairie Regional Laboratories is treated separately at pp. 379-380.

Applied Biology.—Much of the work of this Division is undertaken in co-operation with industry or for Government agencies, although some fundamental work is done on the metabolism and chemical composition of living organisms.

Milder pulping agents have increased pulp yields by producing semi-chemical pulps which have a higher proportion of the hemicellulose material of the wood. Therefore the structure, properties and behaviour of the hemicelluloses of common pulpwoods are being examined so that the pulp and paper industry may more readily solve its manufacturing problems when using the new semi-chemical pulps. So far, the hemicelluloses of jack-pine, white spruce and beech wood have been studied.

Because blue-green algae have sometimes been implicated in deaths of cattle and other animals, different species and strains of algae have been examined. Two out of nine strains of a single species proved highly toxic; twelve other species or strains were non-toxic. The toxin appears to be produced inside the algal cells and must be released before it is fully effective. Environmental factors greatly affect both the production and release of the toxic material.

Other work concerns the liquid immersion freezing of poultry; the effects of freezing on the enzymes in milk; the lipoproteins of hen egg yolk; and the effects of different bacteria on casein, the principal protein in milk.

* Of particular current interest in the field of scientific research is the International Geophysical Year. Canada's part in the program is dealt with in detail at pp. 35-38.

Applied Chemistry.—The Division of Applied Chemistry is concerned with the best uses of Canadian resources and with chemical problems of wide general interest.

The oxidation of iron and its alloys is an extremely complex problem and is estimated to cost Canada more than \$3,000,000 annually. Studies are being made of the mechanism of corrosion in aqueous solutions and of the oxidation of metals at high temperatures. At the same time, while the corrosion group is working to *prevent* oxidation, several other groups are endeavouring to *enhance* the oxidation of certain chemicals such as ethylene. The product is a very active chemical—ethylene oxide—and the starting point of many other useful materials such as antifreeze. A calcium silver catalyst shows considerable promise.

Work on rain repellents for aircraft wind screens has been brought to a conclusion with the development of a satisfactory one-coat material suitable for most applications. Lignin has been successfully substituted for carbon black in preparing a tire-tread stock. Work on thermoplastics and rubber adhesives for bonding rubber to metal is being continued.

One of the functions of the textile laboratory is to advise the Canadian Research Institute of Launderers and Cleaners, with which the Council has a formal agreement. The aim of this co-operation is to maintain a high standard of operation in Canadian cleaning establishments. Assistance is also given to government departments on such problems as the moth-proofing, rot-proofing and moisture-proofing of textiles. Synthetic detergents are also being examined.

Other industrial problems under investigation include the possible application of the spouted bed technique to industrial drying problems. A pilot model of a sedimentation device has been constructed and successfully operated. The Applied Chemistry Division also works on colloids, analytical chemistry, high polymer chemistry, metallurgical chemistry and physical organic chemistry.

Pure Chemistry.—The Division of Pure Chemistry is organized around a nucleus of outstanding Canadian chemists who direct about twice their own number of young postdoctorate Fellows from all over the world. The work is long-range and fundamental. The products of pure curiosity seem very far removed from ordinary life but the Division's experts are frequently invited to speak to groups of applied chemists and other scientists employed in Canadian industry. They also lecture in universities.

There are thirteen sections in the Division: organic chemistry, mostly on the structure of alkaloids; organic spectrochemistry; organic synthesis; chemical kinetics and photochemistry; mass spectrometry; molecular spectroscopy; surface chemistry; thermochemistry; activated carbon, inorganic and general chemistry; intermolecular forces and physical properties; fibre research; chemistry of fats and oils; and general physical chemistry.

Applied Physics.—The work on applied physics is divided between research projects likely to have a practical value and the continual development of the fundamental standards on which measurements generally are based. All the fundamental physical standards for Canada are housed and serviced in this Division.

The various means developed of decreasing noise from suction rolls in paper mills are now receiving full-scale factory trials. Also, investigation into anomalous drying of paper in the mill has led to recommendations of corrective measures which are now being tested.

Experiments to determine the absolute value of the acceleration due to gravity ("g"), measured by timing the rate of fall of a calibrated rule, show excellent reproducibility. Wavelengths proposed as the new international standard of length are being investigated and new sources for more precise wavelengths are being developed. Friction of inflated rubber tires on ice is being measured and investigations are being continued to develop a good method for testing the worth of winter garments in cold winds.

Mapping experiments carried out under the auspices of the International Society of Photogrammetry were directed by the Photogrammetric Research Section. The airborne-controlled method of aerial triangulation developed by the Section has been studied over hilly terrain and found to be both accurate and efficient even under such difficult conditions. Investigation of radar profiles was extended to high altitudes—of from 25,000 to 30,000 feet. Non-topographical photogrammetry is being advanced by the design of distortion-free lenses for short-distance photography.

In connection with X-rays and nuclear radiations, new instruments have been developed which have eliminated the difficulties of interpretation encountered when output measurements of Cobalt-60 Beam Therapy Units are made with commercial instruments.

Pure Physics.—Investigation is under way on cosmic rays, solid state physics, spectroscopy, X-ray diffraction and theoretical physics. Although the findings on various fundamental problems do not have immediate application, they advance the frontiers of knowledge and supply the basis for further progress in the applied fields.

Four cosmic ray stations have been set up to operate throughout the International Geophysical Year which started July 1957—at Resolute in the Arctic, at Churchill, Man., at Ottawa, Ont., and a new laboratory on top of Sulphur Mountain near Banff, Alta.

A recent highlight in connection with low temperature and solid state physics was the international conference on Electron Transport in Metals and Solids, sponsored by the International Union of Pure and Applied Physics and held at the National Research Council Building. The proceedings were published as a special issue of the *Canadian Journal of Physics*.

Investigation of the spectra of simple molecules continues to form the major portion of the work on spectroscopy, but a start has also been made on studies of atomic spectra.

Programs of crystallographic calculations, devised for the electronic computer FERUT, are now in routine use and are being made available to other X-ray crystallographic laboratories in Canada. Additional powder patterns have been included in the standard file and a number of samples have been examined by the X-ray diffraction powder method for other laboratories. An improved calculation of the electrostatic correction for white dwarf stars has been made with the help of the method of Bohm and Pines for the collective motion of electrons in metals.

Building Research.—Recent field work has included: co-operation in Western Canada with oil companies and others in a pioneer study of access over muskeg; studies of transformer noise which often distinguishes electrical substations, a problem that has been solved in close association with The Hydro-Electric Power Commission of Ontario; housing studies in association with Central Mortgage and Housing Corporation, which the Division continues to serve as research wing for technical housing problems. Laboratory investigations have been made recently on double windows and, to develop economical standard roof-truss design, on wooden roof trusses for small houses. A chimney laboratory has been placed in operation.

The technical and secretarial work for the National Building Code is carried out by the Division for the Associate Committee on the National Building Code. A short version of the main Code has been published in pocket-book form and more than 7,000 copies have so far been distributed. A French translation of the main Code is now available.

Jointly with the Trans-Canada Highway Division of the Federal Department of Public Works, a start has been made on avalanche research and prevention in the Rocky Mountains; in co-operation with the Alberta Department of Public Works, the Division helped in the acoustical design of the two new auditoria that have been built in Calgary and Edmonton; problems of winter construction have been studied in close association with the National Committee established for that purpose; basic studies on soil mechanics and on snow and ice are in progress.

A new suite of laboratories for paint research, a new sound chamber for studies of building acoustics and a new fire research building now under construction will extend the work of the Division.

Mechanical Engineering.—In addition to mechanical engineering, this Division embraces certain phases of hydraulic engineering and naval architecture and many branches of aeronautical engineering. The Division continues to work with the aircraft, shipbuilding, heavy engineering, chemical, and pulp and paper industries and to undertake work for government departments. It also functions as a source of supply of trained engineers and technicians for industry.

The Aerodynamics Section is devoted largely to classified defence projects. In particular, the low-speed and high-speed wind tunnels are engaged continuously on tests of models of several new aircraft under development by Canadian companies.

Work continued on several St. Lawrence Seaway projects to obtain design information in connection with navigation locks and river improvements. In the ship laboratory, the size of ships under study varied from naval escort vessels to small landing boats; problems included propeller design, vibration analysis, cooling water system analysis, and manoeuvring. Full-scale trials were carried out on a number of ships.

The major design effort of the Gas Dynamics Section was on a gas turbine unit suitable for railway traction. The engine laboratory had three principal projects: exhaust reheat of turbojet engines, anti-icing and cold tests of aircraft gas turbines, and improvement of test facilities. The main work of the low-temperature laboratory was directed to development of rotor de-icing equipment for helicopters. Projects of the fuels and lubricants laboratory included work on the evaporation of fuel sprays as applied to combustion of jet fuels, thermal stability of naval boiler fuels, and development of automotive brake fluids.

In the structures laboratory, the major effort was directed to the problem of swept wing aircraft flutter. Other fundamental work was done on the resistance of ship propellers to impact loading and on a design for airport beacon towers which could suffer decapitation without destroying the impacting aircraft. At the request of the Department of National Defence, the engineering laboratory developed and constructed an amphibious motor vehicle for safe travel on frozen lakes where thin patches of ice might not support the weight of an ordinary vehicle. The instruments laboratory designed and developed special instrumentation as required by other laboratories of the Division and, on occasion, by outside organizations.

Radio and Electrical Engineering.—About half of the Division's work consists of defence projects. The remainder of the program, on which information may be released, includes problems in electronics, radiophysics and electrical engineering. Where possible, emphasis is placed on applications of interest to Canadian industry. In the field of electronics the main projects include a remote fog-alarm control; a fog detection device; transistorized control of buoy lights; underwater television; location of crashed aircraft; etc. The motor vessel *Radel II* is an invaluable asset as a floating laboratory to test various radar devices and techniques. Electronic music is also a highly fruitful field of inquiry: a tape recorder has been designed especially for the production of new forms of music; an improved model of the electronic monophonic instrument, featuring improved pitch flexibility, is being built; development of the touch-sensitive organ is being continued.

The two sections of the Division most intimately connected with the International Geophysical Year are: upper atmosphere research which deals chiefly with observations of meteor showers; and the solar noise observatory where radio emissions from the sun have been observed daily for the tenth successive year.

Static electricity explosion hazards, instrument transformer calibration, high voltage research, dielectric research, and detection of flaws in paper are some of the projects in the electrical engineering field.

Medical Research.*—The chief function of the Medical Research Division, which marked its tenth anniversary in 1956, is to make grants and to award fellowships in the field of medicine. For the year 1957-58, 151 grants totalling over \$500,000 were made to individual investigators in Canadian hospitals and universities. Twenty-one Graduate Medical Research Fellowships were awarded for the same year to enable medical graduates to obtain further training in fundamental research.

In addition to seven consolidated grants, 145 grants-in-aid of research to the amount of \$652,056 were awarded in 1955. Forty-one of these grants were for new projects. Medical research was initiated and stimulated by 22 grants given to 20 investigators who had not been supported previously by the Division. More than 170 reports on work thus supported were reviewed.

A new category of Medical Research Associate has been created. The candidate, who must have a doctorate—though not necessarily in medicine—is nominated by a university which must undertake to place him on the faculty and provide adequate facilities for his work. His teaching duties must be limited and he may expect to retain his appointment indefinitely, subject to the satisfaction of the Council and of the university. Six appointments to this new category have been made.

Atlantic Regional Laboratory.—The Atlantic Regional Laboratory studies the preservation and use of food products and some of the problems encountered by secondary industries in the area, such as the storage of several varieties of potatoes, drying of rock-wood, deposition of pitch from sulphite pulp mills in the Atlantic Provinces, and the manufacture of iron and steel. The explanation of deposition of pitch in pulp mills still remains doubtful and requires further study.

The manufacture of steel is a problem in the Atlantic region because high-phosphate ore from Newfoundland is being smelted by means of a high-sulphur coal from Cape Breton. Technical problems are many and are being attacked through studies on oxidation of carbon in steel; factors affecting the equilibria of various constituents, especially phosphorus, between molten iron and slag; and the nature and behaviour of the gases encountered in making steel. The resulting basic slag is high in both phosphorus and calcium and should therefore have a potential use as fertilizer. The main technical problem here is a cheap method of breaking up the slag.

Isinglass has been extracted from cod swim bladders and prepared in a highly purified state; it differs only slightly from similar material from mammalian connective tissues. A systematic survey of the chemical composition of peat from the larger bogs in the Atlantic Provinces is almost finished. This will permit the construction of profiles for various bogs and furnish a sound basis for estimating the resources available. The nature of slime in the 'white' water of pulp mills has been established; it is caused by the growth of numerous fungi associated with symbiotic bacteria. Commercial inhibitors were highly effective.

Prairie Regional Laboratory.—The applied work of the Laboratory is designed to promote and expand the use of agricultural products of the prairie region. Fundamental work includes studies on the properties and reactions of starches, sugars, proteins, fats and oils, and other plant constituents; on the physiology and biochemistry of living plants and of micro-organisms; and on the development of fermentations using a wide variety of nutrients.

Work on producing building boards from straw is now largely of an advisory nature. A local firm is currently building a \$3,000,000 plant in Saskatoon to produce fibreboard and hard board. Another successful investigation has resulted in the devising of a sedimentation method for classifying elevator dusts which is more accurate than the screening methods previously used. A new antifungal antibiotic has been isolated and found effective in large dilution against growth of yeasts, smuts and rust spores. Progress is being made in producing commercially important ergot alkaloids by cultivating ergot fungus in synthetic media.

* See also pp. 386-388.

An attempt is being made to produce protein feed supplements by growing micro-organisms on waste sulphite liquor or molasses media. Also, recent work has shown that vital gluten may be prepared from some low-grade wheat flours.

Administration.—The administration of the foregoing laboratories has now been organized as a Division of Administration and Awards, which exists only to serve the scientist. The five service units of this Division are: Awards and Committee Services (Awards, Committees, Publications, Research Journals); Administrative Services (General Services, Purchasing, Personnel); Information Services (Technical Information Service, Library, Public Relations Branch, and Liaison Offices in Ottawa, Washington, U.S.A., and London, England); Plant Engineering Services; and Legal and Patent Services. The latter Division works closely with Canadian Patents and Development Limited (*see* p. 88). An expert on economic research acts as special assistant to the Assistant Director, Information Services.

Section 2.—Research in the Atomic Field*

Atomic Energy of Canada Limited (AECL), a government-owned Crown company, operates Canada's main atomic energy centre near the town of Chalk River, Ont., 130 miles west-northwest of Ottawa. The company has a nine-man Board of Directors that includes representatives of private industry, public and private power companies, and the universities, and is engaged in four main activities: (1) the development of technology for economic atomic power; (2) fundamental scientific research in the atomic energy field; (3) operation of nuclear reactors and separation of nuclear fuels (plutonium and uranium-233); and (4) production of radioactive isotopes and associated equipment, such as Cobalt-60 Beam Therapy Units for the treatment of cancer.

The company is collaborating with the Canadian General Electric Company Limited and The Hydro-Electric Power Commission of Ontario (HEPC) in the building of an experimental atomic power station, to be known as NPD (Nuclear Power Demonstration), near Des Joachim's, 12 miles up the Ottawa River from the Chalk River plant. The decision to build NPD followed a power reactor feasibility study, started late in 1953 and carried out by engineers of AECL, HEPC, the Montreal Engineering Company Limited, the Shawinigan Water Power Company, the British Columbia Electric Company Limited, and the Brazilian Traction, Light and Power Company Limited. The power reactor is expected to generate 20,000 kw. of electricity. The Nuclear Power Branch at Chalk River, the staff of which was recruited from several power-producing commissions and companies, has been carrying out preliminary design studies for a large atomic power station with an output of 200,000 kw. of electricity.

To ensure that the various publicly and privately owned utilities are kept fully informed of the progress being made, the Government set up in 1954 an Advisory Committee on Atomic Power Development on which the various power producers throughout the country are represented. The committee, which meets periodically at Chalk River, studies the research results obtained at that centre, receives complete information on the NPD station, and assists in evaluating the economic importance of atomic power in various regions of the country.

In 1955 an "industrial assistance office" was set up at Chalk River to create as wide as possible an interest on the part of private companies in the possible applications of atomic energy in general and of atomic power in particular.

Development of the Atomic Energy Program.—The program had its beginning in 1942 when it was decided to set up a Canadian-United Kingdom project in Canada, under the administrative control of the National Research Council of Canada. British, French and other European scientists doing nuclear research moved to North America early in World War II to work on an atomic weapon—the possibility of which became evident when O. Hahn and S. Strassman in Berlin, Germany, announced the first recognition of nuclear fission in 1939.

* Prepared by Clyde Kennedy, Public Relations Officer, Atomic Energy of Canada Limited, Chalk River, Ont.

The United States project used the more readily available graphite to moderate its reactors and the project in Canada was assigned the task of trying heavy water as a moderator so that all possible routes to the production of plutonium for bombs would be tried. In 1944 the Canadian-United Kingdom team moved from the University of Montreal, where preliminary studies had been carried out, to the site which was established on the Ottawa River, about five miles from the town of Chalk River.

On Sept. 5, 1945, ZEEP went into operation. It operated at a mere 10 watts but it made possible a study of the value of a heavy water natural uranium system and it has continued to be useful for studies of fuel rod arrangements. Two years later on July 22, 1947, the NRX reactor went into operation. It was then, and so remained for several years, the most powerful research reactor in the world. The NRX reactor still plays a leading role by making possible important experiments relating to the development of atomic power, enabling the fundamental properties of atoms and nuclei to be determined, and producing radioactive isotopes of high specific activity (i.e., the relation of the amount of radiation to a given weight of material). Both the United States and the United Kingdom are, like AECL, using NRX for atomic power studies. This reactor now operates at a power output of 40,000 kw. (a measure of the heat produced).

In 1946 the United Kingdom established its own atomic energy program and in the same year the Atomic Energy Control Act was passed in Canada "to make provision for the control and supervision of the development, application and use of atomic energy". This Act created the Atomic Energy Control Board.

The Chalk River project was operated on behalf of the Atomic Energy Control Board by the National Research Council until 1952 when a Crown corporation, Atomic Energy of Canada Limited, was established to operate the project on behalf of the Board. A 1954 amendment to the Atomic Energy Control Act requires AECL to report directly to the Cabinet Minister who is Chairman of the Committee of the Privy Council on Scientific and Industrial Research. The Atomic Energy Control Board continues to report to the same Minister.

The next stage in the Canadian program, following the creation of a separate United Kingdom program, consisted mainly of carrying on fundamental research at Chalk River, using the facilities of the two natural uranium heavy-water reactors. The need for a source of higher neutron flux for fundamental research and for engineering studies resulted in the decision in 1951 to build another natural uranium heavy-water reactor known as NRU. This reactor, placed in operation on Nov. 3, 1957, has a heat output of 200,000 kw., five times that of NRX. The NRU reactor has three main functions: the production of significant quantities of plutonium; the provision of advanced experimental facilities for fundamental research and for the testing of power station fuel-coolant systems; and the production of radioactive isotopes of high specific activity, particularly Cobalt-60 which is used in the treatment of cancer.

Activities of the Chalk River Project.—The principal function of this Project is to carry out fundamental research and preliminary engineering development. The Project provides the data which utilities and manufacturers need for a nuclear power program. The work is carried out by an Administration and Operations group and a Research and Development group. The former is responsible for general administration, the operation of the nuclear reactors and associated chemical process plants, the construction and maintenance of buildings, the provision of steam and auxiliary power for the project, and the correlation of the experience of the operating branches with the results obtained by the research branches to produce engineering information for major projects handled by outside organizations.

The activities of the Research and Development group which cover a wide field of fundamental and applied research in physics, chemistry, metallurgy, and biology, are carried out by four divisions: Reactor Research and Development, Chemistry and Metallurgy, Physics, Biology. These divisions conduct short-term and long-term investigations—the short term to provide the basic information required to design and operate

the first Canadian power reactors. A wide variety of possible reactor systems make it necessary to conduct extensive investigations, both mathematical and experimental, to determine which are likely to be the most economic and efficient. The longer term work, though mainly the responsibility of physicists and biologists, also involves the chemistry of substances which have become important (or have come into existence) only since the development of atomic energy.

The Reactor Research and Development Division is engaged in experiments and calculations required for the design of nuclear reactors for atomic power stations. Control systems for such plants and for the Chalk River reactors are being studied. The ZEEP reactor has been in constant use in determining the reactive efficiency and other characteristics of various fuel element arrangements. Many fuel samples have been tested in the NRX reactor under conditions simulating those which will exist in power plants. These experiments are providing essential information on the behaviour and suitability of different physical forms of the fuel, or different kinds of cladding to prevent corrosion of the fuel, and of heat transfer characteristics.

The Chemistry and Metallurgy Division includes a number of research groups which are making a co-ordinated attack on the problems of the preparation and processing of reactor fuel. The division develops fuel elements for the NRX and NRU reactors and for power reactors. Much of the work is being done in collaboration with the Department of Mines and Technical Surveys.

In the Physics Division work has continued on the study of nuclear structure, using the experimental facilities of the NRX reactor and the particle accelerators, such as the 3,000,000 electron volt Van de Graaff Generator. A 10-million volt machine, known as a Tandem Accelerator, will be installed at Chalk River in 1958. This new type machine, which consists of two Van de Graaff accelerators placed end to end horizontally, will make it possible to carry out research programs on heavy nuclei with an accuracy and efficiency never before possible.

The activities of the Biology Division include the control of radiation hazards, the development of decontamination methods, the study of uses of radioactive isotopes in biological research, and the investigation of the effects of radiation on living organisms.

Canada pioneered in the production of radioactive isotopes and the Chalk River project now produces a wide variety of isotopes for use in industry, agriculture and medicine. The high flux of NRX enabled AECL to produce relatively large quantities of Cobalt-60, with a high specific activity, for use in cancer therapy units. The combined production of NRX and NRU will be required to satisfy the demand from many countries for Canadian units.

The marketing of radioactive isotopes and associated equipment is handled by the Commercial Products Division of AECL with headquarters in Ottawa. Seventy-six cancer treatment machines, designed and built by the Division, had been installed in 13 countries by mid-1957.

Section 3.—Other Scientific and Industrial Research Facilities

Aside from the work of the National Research Council and Atomic Energy of Canada Limited, Canadian research is carried on by various federal agencies, provincial organizations, universities and industries. Several provinces in Canada have established Provincial Research Councils to stimulate and support research on problems having special provincial significance. The universities of course form an extremely important part of the Canadian pattern of research. Much of their work is along fundamental lines but practical problems are not neglected, especially those of regional interest.

All three types of institutions—federal, provincial and university organizations—have an interest in problems of industrial significance: this is part of the current Canadian pattern of research. Though many Canadian industries now possess research facilities—some of them quite extensive—the main bulk of industrial research to date has been done under government auspices.

Thus the unique problems of the country, particularly its large area coupled with a small population, have led to a typically Canadian organization of research, of which a very strong associate committee system is perhaps the most distinctive feature.

Subsection 1.—Federal Organizations

Although research by industrial concerns has been slow to develop in Canada, government research has expanded rapidly, at first because of the need for speeding up the production of raw materials, which were for many years the basis of Canada's export trade, and secondly because of the more recent interest in the processing of these raw materials and the necessity of meeting the needs of national defence. Federal agencies involved in research include the Departments of Agriculture, Fisheries, Mines and Technical Surveys, National Defence, National Health and Welfare, Northern Affairs and National Resources, and Trade and Commerce; the National Research Council; and Crown corporations such as Atomic Energy of Canada Limited. A system of committees, with nation-wide representation, eliminates unnecessary duplication of work from these national research organizations.

The scientific work of the Department of Agriculture is described in Chapter IX of this volume, the work of the Defence Research Board in Chapter XXVIII, specialized work in scientific forest research in Chapter X, scientific services concerned with Canada's mineral resources conducted by the Department of Mines and Technical Surveys in Chapter XI, investigational work of the Department of Fisheries in Chapter XIII, research of the Canadian Wildlife Service of the Department of Northern Affairs and National Resources in Chapter I, the work of the National Research Council at pp. 373-380 and atomic research at pp. 380-382. The activities of the other federal agencies engaged in research are described briefly in the following paragraphs.

Department of National Health and Welfare.—The Department of National Health and Welfare supports both intramural and extramural research programs. Within the Department, the Food and Drug Directorate, Laboratory of Hygiene, Occupational Health Laboratory and various clinical services are engaged in scientific research in their respective fields. Special studies and surveys are conducted in social and medical economics by the Research Division. The extramural program consists of grants-in-aid of medical research at universities, hospitals and other research institutions from funds under the National Health Program. The Public Health Research Grant provides over \$500,000 per annum with allocations from the Mental Health, General Public Health, Tuberculosis, Cancer, Child and Maternal Health and Crippled Children's Grants making up approximately \$1,250,000 additional funds. To co-ordinate medical research programs, meetings are held by representatives of the National Research Council, Defence Research Board, Department of Veterans Affairs, National Cancer Institute and the Research Advisory Committee of the Department of National Health and Welfare. These have provided for reasonably clear definitions of the field of interest of each organization and have minimized uneconomical overlapping.

Grain Research Laboratory.—Rapid development of grain production in Western Canada led to the passing, in 1912, of the Canada Grain Act. This Act is administered by the Board of Grain Commissioners, a Crown corporation which reports to Parliament through the Minister of Trade and Commerce. The Board is responsible for control of the transportation, weighing, grading and warehousing of Canadian grain. Soon after its establishment, the Board encountered problems that required scientific study and a Grain Research Laboratory was established at Winnipeg, Man., in 1913.

The Grain Research Laboratory is the main centre of research on the chemistry of Canadian grains. It is well staffed and equipped to provide the service required to help maintain and expand domestic and foreign markets for all types of grain. The Laboratory collects and tests samples of various crops to obtain information on the current quality of all grains shipped during the crop year and prepares, annually, certain information

required by the Board for administering the Canada Grain Act. Fundamental research is also undertaken; the program is directed toward increased understanding of what constitutes quality in cereal grains and towards improving the methods of assessing quality.

Subsection 2.—Provincial Organizations

The fact that only a few provincial research organizations exist does not indicate a lack of interest in research by the provinces. Most provincial governments have university laboratories to consult, particularly about local industrial and agricultural problems. Agriculture is particularly well covered because of its great importance as an export industry; the network of Federal Department of Agriculture laboratories and Experimental Stations, together with agricultural colleges and provincial research councils, provides this industry with a very well developed research service.

Nova Scotia Research Foundation.—This body was created by the Government of Nova Scotia in 1946 to give its people additional scientific and technical assistance in finding new and better ways to utilize the resources of the forest, the sea, the farm, the mine and the process industries. To this end it seeks to correlate and further scientific work on local problems and available resources. It assists universities, colleges, research groups, industries, provincial and federal departments and individuals by loans of equipment, grants, scholarships, laboratory and summer assistants, library, cartographic, photogrammetric and translation services, and technical information. It has supported or collaborated in work on breeding new varieties of plants and root nodule bacteria; on antibiotics, poultry, blueberry culture, coal burning equipment, the constitution and gasification of coal, the non-destructive testing of mine equipment, the utilization of anhydrite, diatomite, fish waste, gypsum, seaweed, slag, slab wood and fertilizing materials. It has conducted geophysical, geological and seaweed surveys as well as forest aphides, forest ecology and genetic studies and assisted studies on the nutrient cycles of lakes, on X-ray crystallography, and on pressures in underground strata. Its Geophysical Division is now equipped to undertake all types of magnetometric, gravimetric, resistivity, seismic and electromagnetic explorations while its Technical Services Division provides an ever-increasing assistance to industries of the Province. During the summer of 1956, 93 people were engaged on 27 projects.

Saskatchewan Research Council.—The Saskatchewan Research Council was established in 1947 for "research and investigation in the physical sciences as they affect the economy of the Province of Saskatchewan, and such particular matters as may be brought to its attention from time to time by the Lieutenant-Governor in Council". The term 'physical sciences' is given a broad interpretation to include biology, geology and engineering. Within this field the Council undertakes basic and applied research.

Up to the present the Council has functioned mainly by granting funds for approved research projects and awarding scholarships at the University of Saskatchewan. It has also conducted a technical information service with the assistance of the National Research Council. It is now entering a new phase and, in addition to its former activities, will employ a full-time staff in a new laboratory building located on the University grounds.

Research Council of Alberta.—The Province of Alberta set up a Scientific and Industrial Research Council in 1921, the promotion of mineral development within the Province being the chief purpose leading to its establishment. The Council operates under an Act somewhat similar to that setting up the National Research Council and is financed by Provincial Government appropriations. The present program is directed to the application of basic and applied science toward the development of the natural resources of the Province. Investigations include studies on coal, the Athabasca oil sands, natural gas, geological research and surveys, soil surveys and irrigation research. The Council maintains a gasoline and oil testing laboratory and has a group of industrial engineers to provide scientific information to developing industry. The Council laboratories are located at the University of Alberta and include a \$750,000 research laboratory and pilot plant provided

by the Province of Alberta in 1955. The laboratories work in co-operation with the scientific departments of the University and the operations of the organization are controlled by a council of ten individuals representative of government, the University and industry. The various research projects are under the immediate supervision of advisory committees and the chairmen of these committees form the Technical Advisory Committee of the Council, the body responsible for the integration and operation of the scientific aspects of the program.

British Columbia Research Council.—The British Columbia Research Council, under the sponsorship of the B.C. Department of Trade and Industry, provides a scientific and engineering staff with laboratories at Vancouver to help British Columbia industries solve their technical problems. Its objective is to enable even the smallest firms to make use of modern technical knowledge and research to improve their competitive position in Canadian and world markets. The Council provides three classes of service: (1) a free information service in collaboration with the National Research Council; (2) assistance to specific firms at cost where information cannot be supplied from existing knowledge; and (3) at the Council's expense, research on problems of general value to the industrial development of the Province.

The Ontario Research Foundation.—The Ontario Research Foundation was established in 1928, and is financed by an endowment fund composed of subscriptions from manufacturers, corporations, private individuals, and a grant from the Provincial Government on a dollar-for-dollar basis with the other contributions. The Foundation carries on research to assist agriculture and industry in developing the natural resources of the Province. A study has been made of the physiography and climate of southern Ontario and also of the parasites found in wildlife in this Province. Many investigations have been undertaken in the industrial field and the Foundation is well equipped to work in metallurgy, textiles, chemistry and biochemistry. The services of the Foundation are at the disposal of industry on a fee basis, and consultative services, testing, short trial studies and long-term investigations have been undertaken for hundreds of firms. The work has resulted in better products and in more efficient processing. The Foundation administers a grant from the Provincial Government to support postgraduate scholarships and scientific research in the universities of Ontario.

The Hydro-Electric Power Commission of Ontario.—The Research Division of Ontario Hydro, with a present staff of 300, provides testing, investigation and research services for all phases of the utility's engineering design, construction work, and system operation and maintenance. The Division maintains a close liaison with other research organizations and power utilities, and staff members participate in the committee work of major technical societies and standardizing associations.

Electrical investigations pertain to methods of generating, transmitting, distributing and utilizing power, and to improvement in equipment for these purposes. Among the topics studied are problems of electrical insulation; system operation and control, and system protection against lightning; communications and telemetering; illumination; and power metering. Attention is given to the performance and efficiency of power equipment, to improved measuring techniques, and to means of minimizing the hazards of electric shock.

Among the structural and mechanical topics studied are the following: soil mechanics as related to foundations, roads, and earth dams and dykes; the physical properties of structural components and of numerous items such as conductor joints and line hardware; the mechanical performance and safety features of equipment and various types of machines; metals and metallurgy; welding materials, techniques and applications; atmospheric and underground corrosion of metals; stresses in materials and structures; noise and vibration conditions; and a variety of problems associated with the design, construction and maintenance of concrete structures, the application of masonry materials, and the production, placement and quality control of all concrete used.

In addition to chemical analyses and tests performed on a wide range of materials and products purchased, chemical research work is conducted with regard to such subjects as wood preservation, plastics applications, protective coatings, brush and weed control, lubrication, liquid electrical insulants, water treatment, thermal insulation, and corrosion prevention.

Other studies contributory and supplementary to the main branches of work are carried on in the fields of physics, biology, petrology and mathematics.

Subsection 3.—Medical Research

Medical Research Facilities.*—Support for medical research is provided by the Federal and Provincial Governments, by private foundations or corporations, by voluntary agencies which raise money by public subscription, and by universities and hospitals. From these sources there are available (a) research fellowships for training, (b) grants-in-aid for assistance in problems of a fundamental or clinical nature, (c) salaries for trained personnel, and (d) the necessary capital and running expenses for investigations which are of particular interest to government, hospital or pharmaceutical house.

The Department of National Health and the Department of National Defence maintain establishments in which research is done in well-equipped laboratories with highly trained personnel. The Department of Veterans Affairs encourages its staff to do research in its own hospitals; much of this concerns chronic illness, such as arthritis, atherosclerosis, metabolic and nutritional derangements.

Most of the fundamental medical problems are studied in medical schools through the system of grants-in-aid. Funds from the Federal Treasury are provided through the National Research Council, the Defence Research Board, and the Department of National Health. The National Research Council supports mainly research in the basic medical sciences—anatomy, physiology, biochemistry, pharmacology, bacteriology, pathology, and experimental surgery—but 20 p.c. of its grants are for clinical investigations. The Defence Research Board makes grants for studies in which it is particularly interested, such as shock, the preservation of blood and the use of blood substitutes, the effects of low temperatures and of radiation, etc. The Department of National Health and Welfare provides funds for research, available on the recommendation of provincial departments of health, in the following fields: public health research, tuberculosis control, child and maternal health, mental health, and general public health. It also gives assistance to the Canadian Arthritis and Rheumatism Society (which obtains other support by public subscription) and to the Ontario Heart Foundation (which derives its other resources from the Ontario Provincial Government). In addition the Department of National Health and Welfare makes available to the provinces cancer grants, out of which the provinces may supplement the funds for research which the National Cancer Institute receives from the Canadian Cancer Society. Thus the Department of National Health and Welfare is the Canadian agency which gives the greatest support to extramural research in medicine; its interest is primarily in those problems that have a direct bearing on the health of the nation rather than in fundamental research.

Universities receive funds for research also from provincial branches of the Canadian Cancer Society and from such government foundations as the Ontario Cancer Treatment and Research Foundation and the Alcoholism Research Foundation, from fraternal societies and clubs such as the Rotary Club, from the J. P. Bickell Foundation, the Atkinson Foundation, the Canadian Life Insurance Officers Association, the Muscular Dystrophy Associations of Canada, the Banting Research Foundation, the Multiple Sclerosis Society, pharmaceutical companies, etc.

With help from these diverse sources, active research programs are in progress in every one of the twelve Canadian medical schools. In certain of these there are special departments devoted to research, e.g., the Departments of Medical Research at the

* Prepared by Dr. G. H. Ettinger, Assistant Director, Division of Medical Research, National Research Council, Ottawa.

University of Toronto and at the University of Western Ontario, and the Department of Investigative Medicine at McGill University; these departments contain graduate students who work to higher degrees. With few exceptions, departments designed for undergraduate instruction are active in research; a majority provide graduate instruction as well, in which the students are maintained on research fellowships or grants.

Notable contributions to medical knowledge are made every year by Canadian scientists, but space permits the mention of only a few fields: studies on epilepsy at the Montreal Neurological Institute; functions and interrelations of areas in the brain and brain stem and studies in neurophysiology and neurochemistry at McGill University, the University of Ottawa and the University of Western Ontario; endocrine and metabolic studies at McGill University and the Universities of Montreal, Toronto, Western Ontario and Manitoba; anticoagulants at the University of Saskatchewan; atherosclerosis and hypertension at McGill and Queen's Universities and the Universities of Western Ontario and British Columbia; hypothermia at the University of Toronto; surgery of heart and blood-vessels at McGill University and the Universities of Toronto and Montreal, and the Montreal Institute of Cardiology; tuberculosis at Dalhousie University, the Institute of Microbiology, Montreal, and the Connaught Medical Research Laboratories, Toronto; mental health studies at the Department of Health, Nova Scotia, the Allan Memorial Institute at McGill University, the University of Toronto, Regina General Hospital and the University of British Columbia; virology, including poliomyelitis, at the Institute of Microbiology, Montreal, the Sick Children's Hospital, Toronto, and the Connaught Medical Research Laboratories; bacteriology, immunity and hypersensitivity at McGill University, the University of Montreal, Queen's University, the University of Western Ontario and the University of Toronto; cancer in all the medical schools.

Connaught Medical Research Laboratories.—The Connaught Medical Research Laboratories, University of Toronto, were established for the advancement of preventive medicine and public health through research and through the preparation of biological and other products essential in prevention or treatment of certain diseases. The Laboratories render a medical public service to all the provinces of Canada and, to an extent, to countries abroad. This service was initiated when the preparation of diphtheria antitoxin was undertaken in the Department of Hygiene at the University in an effort to reduce the toll of deaths from diphtheria in Canada. At the same time, the Department initiated investigations into this and other diseases. Since then, research activities have constantly expanded and today more than seventy studies are being conducted in the Laboratories.

The research program of the Laboratories concerns the broad field of preventive medicine. By including the study of certain animal diseases, particularly those which are transmissible to man, and through preparation of related products, the Laboratories are serving both the medical and veterinary professions.

The research projects are extensive and include studies of bacterial and virus diseases, investigations in immunology, epidemiology, physiology, biochemistry, and in other fields related to preventive medicine. These undertakings are maintained in part through the distribution of products, the furnishing of which constitutes an important public health service.

Important to the advancement of public health is the assistance rendered by the Laboratories in the postgraduate teaching of medical officers of health, nurses, dentists, veterinarians, and other professional personnel. From the inception of the Laboratories in 1914, members of the staff have been closely associated with postgraduate teaching in public health. In 1924, through the beneficence of the Rockefeller Foundation and with the co-operation of the Government of the Province of Ontario, the School of Hygiene was established. This provided greatly enlarged teaching facilities and also extended the participation of the Connaught Medical Research Laboratories in the work of training public health leaders.

On the University campus the College Division of the Connaught Medical Research Laboratories and the School of Hygiene share one building, permitting of joint use of research and laboratory facilities of the two institutions, and promoting a close

and mutually advantageous relationship. Here also the production of insulin and other glandular products is undertaken. On Spadina Crescent in Toronto, the Spadina Division of the Laboratories provides accommodation for much important work including the production of penicillin and research in the field of antibiotics. Additional facilities are provided near Toronto at the Dufferin Division and include a 145-acre farm property with modern laboratory buildings and quarters for animals.

Through the organization of the Western Division in the University of British Columbia, the Connaught Medical Research Laboratories have shared in the development of an important program of research in preventive medicine on the Pacific Coast.

Thus for over forty years the Connaught Medical Research Laboratories, with the co-operation of the medical profession and the official public health authorities, have contributed in steadily increasing measure to the advancement of research and public health in Canada.

The Banting Research Foundation.—The Banting Research Foundation supports the work of the Banting and Best Chair of Medical Research in the University of Toronto and aids medical research throughout Canada by making grants-in-aid to those who submit problems of sufficient medical interest to the Board of Trustees. The Board meets and makes grants usually three times a year, around June 1, Oct. 1 and Feb. 1. Five members of the Board of Trustees are appointed by the Board of Governors of the University of Toronto and the Alumni Association of the University of Toronto, and these five members appoint two other Trustees, then the seven members appoint an eighth Trustee.

Subsection 4.—University Research

Canadian universities and colleges would subscribe to three basically essential aims though with varying degrees of emphasis: (a) the diffusion of knowledge through sound teaching, extension and evening classes and written reports, (b) the conservation of knowledge and its reorganization and (c) the extension of the boundaries of knowledge through research. Most undergraduate courses attempt to provide a basic understanding in a number of subject fields with more extensive knowledge in one or more of these. The graduate courses provide a wider and deeper appreciation and understanding in a limited field through advanced courses, seminars and individual research. Practice in the research methods of the disciplines, using experiment, questionnaire, logic of the subject, or statistics is intended to prepare students capable of adding to present knowledge.

Research in the universities was first undertaken to obtain knowledge for its own sake, or pure research. It was soon recognized that this provided basic information on which applied science rests and it was followed through. More recently the universities, because of their unique position in having trained specialists and equipment, have undertaken emergency and other contractual research. The trend to pursue all three has been expanding rapidly and has created new problems as well as providing greater opportunities for undertaking sizable tasks which could not have been considered otherwise. Broadening of the field of research has indirectly been responsible for increasing the capacity of the universities to educate advanced students and has occasionally improved the quality of their education through providing large-scale equipment otherwise beyond the ability of the institution.

Research presently undertaken in the universities falls into three broad categories: projects undertaken by the student under the guidance of a professor or committee to meet requirements for an advanced degree; that undertaken by the professor, which may be of a more or less continuous nature; and larger research projects undertaken co-operatively on a faculty or interfaculty basis in the university laboratories or in such specialized institutions connected with the university as medical research laboratories, institutes of microbiology and hygiene, science service laboratories and agriculture colleges.

Some idea of the increase in research undertaken by Canadian universities is obtained from a comparison of the situation in 1919 (when two universities—Toronto and McGill—offered graduate courses beyond the master's degree and graduated 11 students) with the

situation in 1955. In 1955 Ontario had four, Quebec three and six other provinces each had one major university with graduate facilities and conferred 294 doctorates in course, distributed by fields as follows: biological sciences, including medical and agricultural sciences, 83; engineering and applied science, 6; humanities, 50; physical sciences, 115; social sciences, 38; and unclassified, 2. Subject matter covered in these and reports of other research conducted by university professors and reported in professional journals is encyclopaedic and reflects specialization and variety. Outstanding research in different fields has become associated with various universities, for example: nuclear research and geophysics in McGill, Queen's, McMaster and Saskatchewan; medical research in the Connaught Laboratories and in the Montreal Neurological Institute, to mention two; agricultural research in the western universities; and fisheries research in British Columbia.

Outside financial support for university research comes primarily from three sources: Departments of the Federal and Provincial Governments and including the National Research Council and Defence Research Board which provide grants for approved and contracted government sponsored research; industry which supports both basic and applied research; and private foundations which provide grants for approved research, sometimes in selected fields.

Expansion of facilities and the organization of personnel for research is not haphazard but the result of policy decisions. The present trend is towards the selection of department heads with consideration of expansion of research and the co-ordinating of research within broad fields.

Subsection 5.—Industrial Research

Industrial research in Canada is changing very rapidly. In the past, industry in general was largely unaware of the value of research to its own development and to that of the country, partly because many Canadian companies were subsidiaries of companies in the United Kingdom and the United States and partly because small companies found it impossible to finance their own research. The problem was accentuated by the vast size of the country, the absence of concentration of similar industries and the proximity to the relatively large research facilities of the United States.

However, the emergence of Canada as a highly industrialized society, its entrance into multitudinous fields of production, the rapid growth of many large nation-wide industries, the serving of a discriminating domestic market and the meeting of competition from abroad have had the effect of making Canadian manufacturing establishments research conscious and many of the larger ones now possess competent research organizations. The fields covered by some of these industries are outlined in the 1956 Year Book at pp. 386-389. The research work of the Canadian Pulp and Paper Association, an independent corporation combining efforts of government, university and industry in the expanding field of pulp and paper research, is described in the Forestry Chapter of this volume.

Industrial Research-Development Expenditures in Canada, 1955.—A survey was conducted in 1955 of some 2,500 of the larger industrial firms in an attempt to measure the extent of the research program being undertaken and to obtain an indication of its direction. From this survey information was secured on research costs incurred by Canadian companies—both direct expenditures, and cost of purchasing research-development results from affiliates or from other companies located in Canada and in foreign countries. Data were also secured on the principal fields in which the research was carried out and on the number of professionally trained research personnel employed. The magnitude of the research-development costs in 1955 and the increase planned for 1956 give an indication of the size of the program and the direction in which business is searching for new products, for new and more efficient processes and for improvements to existing products and techniques.

The research-development program was reported by industry as totalling almost \$66,000,000 in 1955 and was estimated at close to \$80,000,000 in 1956. By far the major part of the work in 1955 was conducted within the companies themselves and accounted for \$52,000,000. An additional \$12,000,000 was spent for research-development done outside Canada, the bulk of which was in the United States. The remaining \$2,000,000 was spent for research done by other companies in Canada.

1.—Research-Development Expenditures by Industry 1955 and 1956

Industry	Research Expenditures 1955	Estimated Research Expenditures 1956	Increase or Decrease
	\$	\$	p.c.
Mining, quarrying and oil wells.....	3,045,624	3,619,300	18.84
Manufacturing—			
Foods and beverages.....	1,705,727	1,779,122	4.30
Rubber products.....	2,719,839	2,997,234	10.20
Leather products.....	156,900	169,500	8.03
Textile products.....	1,160,969	1,294,820	11.53
Wood products.....	94,815	87,500	— 7.72
Paper products.....	4,049,008	4,595,425	13.50
Iron and steel products.....	3,088,257	3,297,120	6.76
Transportation equipment.....	16,553,409	22,771,645	37.56
Non-ferrous metal products.....	4,530,242	5,109,200	12.78
Electrical apparatus and supplies.....	10,780,204	11,896,124	10.35
Non-metallic mineral products.....	1,101,488	1,073,927	— 2.50
Products of petroleum and coal.....	4,704,498	5,653,883	20.18
Chemical products.....	7,844,984	10,135,587	29.20
Other manufacturing ¹	297,500	518,400	74.25
Transportation, storage, communication and public utility operations ..	3,350,609	3,371,900	0.64
Other non-manufacturing ²	701,542	934,060	33.14
Totals.....	65,885,615	79,304,747	20.37

¹ Includes tobacco and tobacco products and miscellaneous manufacturing services, engineering and scientific services and trade associations.

² Includes construction, health

The following estimates of research-development in the various fields of activity in 1955 show that mechanical engineering, chemistry, chemical engineering, electrical engineering and metallurgy together accounted for 86 p.c. of the total. Expenditures in the chemistry and the chemical engineering fields, which are closely related, accounted for almost one-third of the total. Every industry reported some activity in the chemical research field and in at least one phase of engineering research.

2.—Research-Development Expenditures by Field of Research 1955

Field of Research	Amount	Field of Research	Amount
	\$		\$
Chemistry.....	13,370,558	Electrical engineering.....	13,777,617
Physics.....	3,066,917	Mechanical engineering.....	16,136,820
Geology.....	733,969	Other engineering.....	1,309,189
Medicine.....	1,454,999	Metallurgy.....	5,611,277
Agriculture.....	517,165	Other.....	1,294,263
Biology.....	471,144		
Chemical engineering.....	7,601,550		
Civil engineering.....	540,147	Total.....	65,885,615

Arrangement of industrial-research expenditures by size group based on annual sales of research-active firms shows that the larger firms accounted for the major part of the expenditures—firms with annual sales in excess of \$50,000,000—although this size group included only 14 p.c. of the firms maintaining research establishments.

3.—Research-Development Expenditures by Size Group 1955

Size Group ¹	Firms	Research-Development Cost	Percentage of Total
	No.	\$	
\$50,000,000 or over.....	52	42,723,889	64.85
\$10,000,000 to \$49,999,999.....	92	13,773,730	20.91
\$ 1,000,000 to \$ 9,999,999.....	199	8,572,856	13.01
Under \$1,000,000.....	34	815,140	1.23
Totals.....	377	65,885,615	100.00

¹ Based on annual sales value in 1955.

During 1955 the equivalent of 2,914 professionally trained scientists were employed on research-development projects. The three top industrial groups, in terms of numbers of professionally trained employees, were electrical apparatus and supplies, transportation equipment and chemical products, which together accounted for 58 p.c. of the total professional employment in the research field.

Classification of the professional scientists by field of research and degree of training reveals that in all phases of engineering research there is a greater predominance of professional employees with bachelor degrees. On the other hand, chemists, physicists, geologists and other earth scientists and biological scientists, although predominantly trained to the bachelor level, have a greater percentage of professional employees with master or doctorate degrees than in the engineering field or in the over-all pattern.

4.—Professional Research-Development Scientists Employed, by Field and Level of Training 1955

Field of Profession	Level of Training			Total
	Bachelor	Master	Doctorate	
	No.	No.	No.	
Chemical engineer.....	345	52	48	445
Civil engineer.....	27	5	1	33
Electrical engineer.....	416	57	9	482
Mechanical engineer.....	416	21	7	444
Other engineer.....	220	22	10	252
Chemist.....	392	120	203	715
Physicist.....	82	28	33	143
Geologist, geophysicist and other earth scientist.....	19	6	8	33
Metallurgist.....	129	16	18	163
Mathematician.....	20	3	2	25
Medical scientist.....	3	3	67	73
Agricultural scientist.....	15	4	3	22
Biological scientist.....	18	3	7	28
Unclassified and other.....	52	1	3	56
Totals.....	2,154	341	419	2,914

CHAPTER IX.—AGRICULTURE

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Agriculture is one of Canada's leading primary industries and is of particular importance to the economy of the country. Special articles that have appeared in previous Year Books dealing with the historical development of agriculture and with significant features of that progress are listed in Chapter XXIX under the heading "Special Material Published in Former Editions of the Year Book". The following article covers, briefly, trends in the postwar period.

POSTWAR AGRICULTURE*

The trends in postwar agriculture have been quite well marked. A larger over-all output of agricultural products has been accomplished with a reduced labour force. Canada's population has increased to more than 16,500,000, about 34 p.c. since 1946, and industry generally has been able to absorb quite readily the annual increment of new workers entering the labour force from natural increase in the adult population and from immigration. This buoyant activity, together with little unemployment, has resulted in steady and advancing incomes and therefore in active demand for almost all classes of commodities including foods. Thus the domestic market has utilized a much larger proportion of the increased output of agricultural products, bringing about a change in the prewar pattern of Canada's agricultural export trade.

Agricultural Production.—As already stated, the volume of agricultural production increased considerably over the postwar period. The index of physical volume, calculated on the basis of 1935-39 equalling 100, stood at 165.3 for 1956 as compared with 125.6 for 1946. Fluctuations registered in the interval were attributable in large measure to the size of the western grain crop. But even allowing for the years of bumper grain production, there was a consistent increase in the output of almost all agricultural products.

* Prepared under the direction of Dr. J. G. Taggart, C.B.E., Deputy Minister of Agriculture, Ottawa.

Hog slaughterings, which reached a peak during the period of the wartime bacon contracts with the United Kingdom, varied through the years since then, but remain at more than 1,000,000 above the 1935-39 average of 3,400,000. In three of the postwar years they exceeded that average by 2,000,000. Slaughterings of cattle and calves showed a similar upward trend, increasing almost consistently through the years and in 1956 exceeding the 1935-39 average of 1,500,000 by just over 1,000,000. Total milk production varied in the postwar years between 15,300,000,000 lb. and 17,600,000,000 lb. annually.

Since the end of the War the number of farm workers has declined by an average of 30,000 annually and it is estimated that only about 15 p.c. of the gainfully employed in Canada are now on farms. Ability to reach the high level of production with a much reduced labour force resulted largely from the great increase in mechanical farm operations. About \$2,000,000,000, or one-fifth of farm capital, is now invested in machinery and equipment. This includes one tractor for every 242 acres of improved farm land. Electricity is available on 75 p.c. of Canada's farms and provides power for many kinds of labour-saving devices. Some indication of the growth in mechanization is shown by figures secured from eight of the Department of Agriculture's Illustration Station Farms in southeastern Saskatchewan; in 1940, 17 p.c. of total farm capital in that area was in machinery and by 1956 the proportion was 41 p.c.

Also of great importance in the advance of agricultural output has been the constant introduction of improved methods of farming based on the work of agricultural scientists. Long-term research of the plant breeders, for instance, has produced disease-resistant and newer crop varieties which have increased production materially through higher yields. Today special varieties of almost all agricultural crops have been developed to give best results under the varying climatic and soil conditions existing throughout Canada. Chemical destruction of weeds, almost in its infancy during the War years, today is common practice and vast areas of crops are treated with a variety of chemical preparations that effectively destroy or control weeds. The development of new and better insecticides and fungicides has kept pace with the chemical treatment of weeds and with a corresponding effect. Irrigation and more efficient production and harvesting methods have also played a part.

At the same time, in considering crop yields, nature must not be overlooked. Canada has recently had a cycle of excellent growing years; should this be replaced by a less favourable growing cycle, yields might well decline and over-all crop production be reduced.

The livestock industry has also undergone considerable change. Plans for the eradication of tuberculosis and brucellosis among cattle have received greater impetus. Record of performance testing and artificial insemination of cattle is contributing to better strains of livestock and poultry. Dairy research is having its effect, and studies relating to poultry and of new methods of preparing and packaging poultry products for market have given this industry something of a new look.

In these and many other ways research is contributing toward the increase in production. Research work on test plots and in laboratories is being applied in the everyday operations of Canadian farms and agriculture is becoming more and more a scientific operation.

The Domestic Market.—Canadians spend about one-quarter of their income on food. At present they consume in one form or another about 99 p.c. of all milk produced in the country, exports of pork products have become quite small in relation to domestic consumption, and in 1955 and 1956 Canada became a net importer of beef and poultry. It therefore seems clear that, particularly since 1950, consumption of all these products has shown a considerably sharper rise than the increase in population. In other words there has been a 'real' increase in per capita consumption.

A striking feature of postwar food consumption has been the increased use of high protein foods such as meat, poultry and eggs, and of the protective foods such as milk and processed dairy products. There has also been greater consumption of fruits and

vegetables, both fresh and canned, but consumption of cereals and potatoes has declined. Thus Canadians appear to be enjoying a much better balanced diet and the Canadian housewife is spending more of her food budget on higher priced foods.

Increased per capita consumption of some products has also been accompanied by changes in consumer preference bringing adjustments in production, processing and marketing methods. In 1956, Canadians consumed 73.6 lb. of beef per capita which is approximately 29.5 lb. more than the amount consumed in 1952 and the highest consumption in 30 years. Also, beef consumed in recent years has been of higher quality. In 1938 the percentage of Red and Blue brand beef was about 21 p.c. of the total kill; in 1956 it was nearly 50 p.c. The increased demand has created a year-round market for these grades and this change in market requirements has resulted in a more efficient use of pasture because, with an assured outlet throughout the pasture season, there is not the necessity, as there was at one time, of trying to reach the early market before the seasonal break in prices.

In 1956 the per capita consumption of poultry was 31.6 lb., an increase of about 10 lb. since 1950. Until fairly recently, poultry production was something of a farm sideline but now it is rapidly becoming a highly specialized farm enterprise. Efficient laying flocks are replacing the old casual layer and the establishment of ultra-modern broiler plants is indicative of the transition in the production of poultry meat. Recent acceptance of turkeys as something more than a Thanksgiving and Christmas feast has been achieved by the introduction of small light-weight birds and by changes in merchandising and processing methods geared to accommodate large-scale production and distribution. Today the public is getting a higher quality product, packaged in more convenient and attractive form and available throughout the year.

Annual consumption of pork products has varied more than other meats during the postwar period. This is because, as farmers assess the potential market demand, they can cut-back or increase the supply of hogs much more rapidly than can be done with beef cattle. Today Canadians are eating about 58 lb. per capita annually compared with a prewar consumption of 39.8 lb. Few adjustments have been necessary to meet the demands of the domestic market. The Canadian hog industry was originally developed to meet the requirements of the United Kingdom market. Fortunately Canadian taste in bacon and hams is almost identical with that of the British consumer and so, as exports to the United Kingdom declined, the domestic market proved a suitable replacement. Recent consumer preference surveys indicate that the Canadian housewife is prepared to pay a premium for lean bacon.

Because of the number of products into which fluid milk can be processed and the speed with which a transition can be made from one to another, trends in the dairy industry are relatively flexible. For some years now the domestic market has been absorbing almost all the output of Canadian farms either as fluid milk and cream or as a processed product. Annual milk production has been around 17,300,000,000 lb. for the past three years. Per capita consumption of fluid milk and cream has been very stable for four years and that of creamery butter has shown little change in the same period. Consumption of cheddar cheese declined somewhat in 1956 but still remains about in line with recent years. Ice cream continues to be an important dairy product and the average consumption is about 16.5 pt. annually.

For a number of years domestic consumption of concentrated milks has been increasing. Dry skimmed milk has become popular in baby-feeding and for partially fat-free diets and consumption has almost doubled since 1945. If the recent trend in domestic sales and exports of evaporated milk is to be maintained the volume of production must be increased. But because fewer heifers are currently being kept for replacement of older cows in the herd, any increase in milk production in the immediate future will depend mainly on an increased production per cow.

The Export Market.—Naturally the expanding demand from the domestic market for Canada's farm production has had a marked effect on the pattern of export trade. In the years 1935-39 Canada exported on the average 33 p.c. of the total agricultural production. The proportion has fluctuated considerably since then, reaching 69 p.c. in 1945, the peak year of the wartime food production drive, and dropping to 24 p.c. in 1953. In 1955, the latest year for which figures are available, it was 28 p.c. Imports of directly competing agricultural products have not varied much from year to year. They averaged 5 p.c. of Canadian farm production for the years 1935-39 and were 4 p.c. in 1955.

There has been a considerable change since before the War in the dependence on the export market by individual commodities. Wheat exports have averaged about 60 p.c. of production but exports of some other grains have increased greatly in terms of production. For instance, barley exports in 1935-39 were 17 p.c. of production and for the 1955 crop they were 27 p.c. The change is even more striking for rye, being from 26 p.c. in 1935-39 to 88 p.c. in 1955, and for flaxseed from 3 p.c. to 59 p.c. Despite the great increase in production there has been a marked decline in the relative dependence on the export market for livestock. The percentages of cattle marketings exported, both live and as meat, were 14 p.c. in 1935-39, and 3 p.c. in 1955. Equivalent figures for hogs show a similar movement, from 24 p.c. prewar to 6 p.c. in 1955. Exports of cheese and apples have also declined relative to production. Cheddar cheese exports were 65 p.c. of production in 1935-39 and 17 p.c. in 1955 and apple exports 52 p.c. in 1935-39 and 15 p.c. in 1955.

Canada's agricultural exports have also shown a decided change in direction during recent years. In the immediate prewar years, 62 p.c. of such exports, other than wheat, found a market in the United Kingdom and 27 p.c. in the United States. During the War, the United Kingdom took all available supplies of many agricultural products. After the War, balance of payments difficulties led to the curtailment of imports of many agricultural products from dollar countries, but the United States showed an ability to absorb greater quantities of Canadian farm products. In the three years 1953 to 1955, 21 p.c. of farm exports, other than wheat, went to the United Kingdom and 53 p.c. to the United States.

The position with respect to imports in the United Kingdom is that under a program of government assistance to agriculture through guaranteed prices and subsidies, domestic production has been stimulated and the dependence on imports reduced. In 1955 the United Kingdom produced 46 p.c. of its requirements of bacon and ham compared with 36 p.c. in 1938. The change in some other commodities was even more marked. Pork advanced from 74 p.c. in 1938 to 91 p.c. in 1955; eggs from 66 p.c. to 91 p.c.; beef from 47 p.c. to 63 p.c. and apples from 23 p.c. to 73 p.c.

The Future Domestic Market.—Whether the active trend of the past decade toward increased domestic consumption of agricultural products will continue appears to be tied in closely with the industrial economy of the country as a whole. With vast new resources being developed, and others still untapped, there seems every reason to conclude that population will increase even faster than in the past, that the domestic market will remain buoyant, and that new industrial areas will be established.

Thus Canadian agriculture faces the problem of meeting the needs of a much expanded domestic market. Canada has many thousands of acres of land in settled areas capable of much more intensive cultivation than at present. These areas are already supplied with electricity and transportation facilities and are within reach of schools, churches and other amenities of life. Scientific agriculture will continue to assist in increasing the potential output of Canadian farms. As already mentioned, hardier and higher-yielding varieties of almost all crops are constantly being developed; crop losses by insects, weeds and disease are being reduced; soil chemistry is making and keeping soils more fertile; irrigation and reclamation of suitable lands is progressing; improvement of livestock is under continual study as is processing, transportation and marketing of the finished product.

Because of Canada's rapid economic growth there has been some encroachment on farm land by industry. Naturally this is most pronounced in areas geographically suited for industrial development, and in such areas some fertile land has been lost to agriculture. However, it seems probable that for some years to come, more intensive cultivation of the present farming areas will compensate for loss of any agricultural land to industry. A possible exception may be in certain areas of southern Ontario where highly specialized crops are now grown and where climatic conditions are the essential factor in their production.

The dearth of farm labour may be a limiting factor to production in those branches of the industry, such as dairying, which cannot obtain much advantage from mechanization. However, during the latter part of 1956 and early 1957 there were indications that the shift of workers from farm to town had slowed down, apparently as the result of a more adequate supply of labour in competing industries, particularly forestry and construction. If the total available labour force tends to level out more evenly among all industries in the years ahead, farmers will find hired help less difficult to obtain.

Section 1.—Federal Government in Relation to Agriculture*

The British North America Act (1867) states in part that "in each province, the legislature may make laws in relation to agriculture in the province" and that "the Parliament of Canada may from time to time make laws in relation to agriculture in all or any of the provinces; and any law of the legislature of a province relative to agriculture, shall have effect in and for the province as long and as far as it is not repugnant to any Act of the Parliament of Canada". As a result of this provision there now exists a Department of Agriculture, with a Minister of Agriculture at its head, in the Federal Government and in each of the provinces except Newfoundland where agricultural affairs are dealt with by the Agricultural Division of the Department of Mines and Resources.

Subsection 1.—General Policy, Price Stability and Farm Credit

The activities of the Department of Agriculture are directed toward the production of marketable farm products. Apart from the initial research and experimentation in connection with operations on the farm itself it is essential that processing, grading and inspection of farm products should be of a high standard if markets both at home and abroad are to be retained and new ones developed. For that reason the inspection and grading activities of the Department have become of increasing importance. By inspection and grading the buyer is able to obtain a product suited to his requirements; the producer is compensated according to the grade of his product and is thus encouraged to produce a high quality commodity.

The results of experimental and research work and the policies of the Department in general are made available to farmers and to the public through bulletins, the press, radio, television and the screen. Regular releases on market conditions and prices are a feature of this publicity.

Price Stability.—The Federal Government has passed a number of Acts designed to give price stability in marketing agricultural products. The most important of these is the Agricultural Prices Support Act, 1944, which permits the Federal Government to stabilize the price of any agricultural product except wheat and coarse grains (which are marketed under other legislation) by outright purchase or by underwriting the market through guarantees or deficiency payments. The following products have been supported under the Act when occasion arose: potatoes, apples, dried white beans, extracted honey, dry skimmed milk, creamery butter, shell eggs, cheese, hogs and cattle.

* Except as otherwise indicated this material was prepared under the direction of Dr. J. G. Taggart, C.B.E., Deputy Minister of Agriculture, Ottawa.

Under the Agricultural Products Co-operative Marketing Act, 1939, price support may be extended by the Government to assist in financing initial payments made by co-operatives to primary producers on delivery of the products for sale. Initial payments are subject to negotiation between co-operative and government but may not exceed 80 p.c. of the average returns for like grades and qualities during the previous three years and the Government guarantees banks against loss in advancing funds to co-operative organizations with whom agreements have been signed. The legislation has been used extensively by co-operatives, and agreements through the years have covered onions, potatoes, corn, many seed crops and ranch bred fox and mink pelts.

A number of provincial governments have legislation providing for the establishment of a Board to regulate or control the marketing of agricultural products sold within the province concerned. Under the British North America Act a provincial government cannot legislate with regard to products marketed outside the province or in export trade, but under the Agricultural Products Marketing Act, 1949, the Federal Government may at discretion permit provincial marketing legislation to be applied in whole or in part to the marketing of agricultural products outside the province concerned and in export trade.

The Agricultural Products Board Act, 1951, states that the Board may buy, sell, export and import agricultural products when directed by the Governor in Council.

Farm Credit and Assistance.—The Federal Government has made provision for the extension of credit to farmers under the Canadian Farm Loan Act and under the Farm Improvement Loans Act. In addition to these two Acts, dealt with in detail below, The Prairie Grain Producers Interim Financing Act, 1956, provides short-term financing necessary by reason of difficulty in the prompt marketing of threshed grain. Certain financial assistance in event of crop failure is provided by the Prairie Farm Assistance Act.

The Canadian Farm Loan Act.—Under this Act, long-term farm mortgage credit is available to Canadian farmers through the agency of the Canadian Farm Loan Board established in 1929. Loans are made to buy farm land, livestock and farm equipment, to make farm improvements and to pay debts and operating expenses.

Prior to June 26, 1956, the Board supplied intermediate-term second mortgage credit to its first mortgage borrowers but on that date the Act was amended and this type of credit was discontinued and the Board's first mortgage lending powers were broadened. First mortgage loans repayable on an amortization plan with equal annual payments are now made for periods not exceeding 30 years and in amounts up to \$15,000 and up to 65 p.c. of the appraised value of the farm offered as security. Funds for lending are borrowed by the Board from the Minister of Finance at current interest rates and are re-lent to farmers at a slightly higher interest rate sufficient to pay the cost of funds and administration expenses. The Board's authorized capital, fixed at \$3,000,000 by the amendment of June 26, 1956, was increased to \$4,000,000 by a further amendment passed on Mar. 28, 1957. The Board's borrowing power is limited to twenty times the amount of its outstanding capital subscribed by the Government of Canada.

In the year ended Mar. 31, 1957, loans were approved for a total of \$13,978,700, an increase of 68 p.c. over the previous year and the largest amount approved in any year since the Board's establishment. Of this total 58.5 p.c. was approved to buy land and pay land-secured debt, 21.6 p.c. to pay debts, 14.3 p.c. to buy livestock and farm machinery and to make improvements and 5.6 p.c. for sundry purposes. At Mar. 31, 1957, 20,372 first mortgage loans and 1,841 second mortgage loans were outstanding for a total of \$53,748,364.

The Farm Improvement Loans Act.—The Farm Improvement Loans Act, administered by the Department of Finance, is designed to provide intermediate-term credit and a type of short-term credit to enable farmers to equip, improve and develop their farms. There is scarcely anything a farmer needs in the way of mechanical aids for his farm operation or his home for which a loan may not be made. Assistance may also be obtained

for the purchase of livestock, principally foundation or breeding stock; for installation or repair of farm electrical systems; for repair, alteration or construction of farm buildings, including the home; and for fencing, drainage and other development projects. Credit is provided on security and terms suited to the individual borrower.

The chartered banks are the lending agency under the Act. The legislation, originally operative for three years 1945-47, has been extended from time to time for three-year periods. The Federal Government guarantees each bank against loss up to 10 p.c. of the total loans made by it during the period. This guarantee does not apply to any loan made after the aggregate of all loans made by all banks in a given period reaches an amount fixed by statute. In 1956 the Act was extended for a further three-year period commencing Apr. 1, 1956, and ending on Mar. 31, 1959. The aggregate of loans for this period, affected by the guarantee, is set at \$300,000,000. By Dec. 31, 1956, only 727 claims amounting to \$425,402 had been paid under the guarantee since inception of the Act.

Loans may be obtained for terms up to ten years with interest not to exceed 5 p.c. The maximum amount to be advanced to a borrower at any one time was increased to \$5,000 by the legislation of 1956. The borrower must provide from 10 p.c. to 40 p.c. of the cost of his project or purchase, depending on the loan category to which it belongs.

By Dec. 31, 1956, \$523,852,496 or 80.2 p.c. had been repaid of the total loans made. The position as of Dec. 31, 1956, was as follows:—

<i>Period</i>	<i>Loans Outstanding</i>	<i>P.C. of Total Loans Outstanding</i>
	\$	
1945-48.....	13,979	0.01
1948-51.....	790,455	0.6
1951-53.....	5,986,856	4.6
1953-56.....	65,404,326	50.4
1956-59.....	57,483,367	44.4
TOTALS.....	129,678,983	100.0

1.—Loans Approved and Disbursed under the Canadian Farm Loan Act, Years Ended Mar. 31, 1948-57

NOTE.—Figures for previous years are given in the corresponding table of former Year Books beginning with the 1940 edition.

Year Ended Mar. 31—	Loans Approved					Loans Paid Out		
	First Mortgage		Second Mortgage		Total Amount	First Mortgage	Second Mortgage	Total Amount
	No.	Amount	No.	Amount				
		\$		\$	\$	\$	\$	\$
1948.....	1,301	3,145,150	517	315,400	3,460,550	2,911,167	274,073	3,185,240
1949.....	1,821	4,450,100	756	469,200	4,919,300	4,169,070	425,966	4,595,036
1950.....	1,949	4,715,500	801	473,900	5,189,400	4,480,779	462,150	4,942,929
1951.....	1,796	4,312,450	680	409,550	4,722,000	4,288,866	404,213	4,693,079
1952.....	1,437	3,929,500	494	308,900	4,238,400	4,131,141	337,951	4,469,092
1953.....	1,685	5,458,750	559	393,550	5,852,300	4,766,149	342,410	5,108,559
1954.....	2,091	7,366,800	591	449,950	7,816,750	6,606,323	394,216	7,000,539
1955.....	2,145	7,902,100	395	323,400	8,225,500	7,849,663	357,339	8,207,002
1956.....	2,057	8,126,900	204	182,750	8,309,650	8,038,877	215,445	8,254,322
1957.....	2,921	13,978,700	—	—	13,978,700	13,154,066	29,926	13,183,992

2.—First Mortgage Loans Approved under the Canadian Farm Loan Act, by Province, Years Ended Mar. 31, 1955-57

NOTE.—Figures for previous years are given in the corresponding table of former Year Books beginning with the 1940 edition.

Province	1955		1956		1957	
	No.	\$	No.	\$	No.	\$
Prince Edward Island.....	116	331,350	104	332,350	136	445,800
Nova Scotia.....	29	88,050	36	123,700	47	221,350
New Brunswick.....	62	184,250	39	106,500	60	234,050
Quebec.....	177	597,400	127	506,600	139	707,350
Ontario.....	428	1,821,250	443	2,058,850	672	3,916,100
Manitoba.....	200	759,700	229	918,950	284	1,346,200
Saskatchewan.....	726	2,706,750	671	2,610,200	897	4,212,600
Alberta.....	307	974,600	314	1,049,600	591	2,381,700
British Columbia.....	100	438,750	94	420,150	95	513,550
Totals.....	2,145	7,902,100	2,057	8,126,900	2,921	13,978,700

3.—Loans Made under the Farm Improvement Loans Act, by Purpose, 1955 and 1956, with Cumulative Totals since 1945

Purpose	1955		1956		Total Loans 1945-56	
	Loans	Amount	Loans	Amount	Loans	Amount
	No.	\$	No.	\$	No.	\$
Purchase of agricultural implements.....	50,857	58,371,706	51,073	60,808,133	516,484	580,279,941
Construction, repair or alterations of, or making additions to any buildings or structure on a farm.....	3,578	4,886,207	3,835	5,374,605	30,989	37,882,721
Purchase of livestock.....	4,443	3,575,023	4,071	3,520,537	27,364	22,482,013
Works for the improvement or development of a farm designated in the Regulations.....	1,329	1,722,794	812	855,238	16,104	10,058,259
Purchase or installation of agricultural equipment or a farm electrical system and the alteration and improvement of a farm electrical system.....	433	460,184	301	193,631	3,663	2,259,396
Erection or construction of fencing or works for drainage on a farm.....	115	89,607	58	67,169	805	569,149
Totals.....	60,755	69,195,521	69,180	70,819,312	595,409	653,531,479

4.—Loans Made under the Farm Improvement Loans Act, by Province, 1955 and 1956, with Cumulative Totals since 1945

Province	1955		1956		Total Loans 1945-56	
	Loans	Amount	Loans	Amount	Loans	Amount
	No.	\$	No.	\$	No.	\$
Newfoundland.....	35	45,790	57	72,276	255	312,642
Prince Edward Island.....	1,225	1,106,055	1,027	990,245	9,096	8,295,816
Nova Scotia.....	1,089	998,938	931	893,272	6,476	5,781,321
New Brunswick.....	838	922,949	744	815,250	5,421	5,741,451
Quebec.....	8,559	9,812,151	9,046	10,960,977	49,915	56,575,800
Ontario.....	11,260	13,647,571	10,305	12,631,582	85,565	94,358,506
Manitoba.....	6,481	6,875,123	6,702	7,732,778	74,755	78,710,680
Saskatchewan.....	14,223	16,585,557	15,468	18,484,970	180,933	206,581,969
Alberta.....	14,896	16,629,025	14,195	16,109,125	165,594	178,715,919
British Columbia.....	2,149	2,482,362	1,705	2,128,837	17,399	18,457,375
Totals.....	60,755	69,195,521	69,180	70,819,312	595,409	653,531,479

Prairie Farm Assistance Act.—The Prairie Farm Assistance Act, passed in 1939 and administered by the Federal Department of Agriculture, provides for direct money payments by the Federal Government, on an acreage basis, to farmers in areas of low crop yields in the Prairie Provinces and the Peace River District of British Columbia. The Act was designed to assist the municipalities and provinces in years of crop failure to meet relief expenditures which would normally be too great to be assumed by them. The Act provides that payments be made to farmers under certain conditions and terms and, in order that Federal Government costs may be defrayed to some extent, it is required that 1 p.c. of the purchase price of all grains (wheat, oats, barley and rye) marketed in the Prairie Provinces be paid to the Federal Government and set aside in a special fund for the purposes of the Act.

If the farmer, who may be an owner, a tenant, or a member of a co-operative farm association engaged in farming, is located in a crop failure area, he may be awarded assistance on not more than one-half of the cultivated land or a maximum of 200 acres. The rates of payment range up to \$4 per acre.

From the inception of the scheme to Mar. 31, 1957, the total amount paid out under the Act was \$186,286,055. The amount collected under the 1-p.c. levy to Feb. 28, 1957, was \$97,740,303.

Subsection 2.—Agricultural Research and Experimentation

The Department of Agriculture conducts on a broad scale scientific research and experimentation on the control of pests and diseases, the nutritional requirements of plants and animals, the breeding and testing of new species and varieties, the microbiology of soils and foods, investigations of crop production and cultural methods, and many other matters. This work is carried on mainly by the Science Service and the Experimental Farms Service and, in addition to providing information on current production problems, is of paramount importance to the long-time well-being of agriculture.

Conservation of the soil is of basic importance to agriculture and research in the form of soil surveys and study of methods for the protection and conservation of soil resources is carried on by the Department in collaboration with the provincial governments. Studies include the chemistry of the soil, cover crops, value of manure and fertilizers, cultural methods, use of tillage machinery and development of large land reclamation projects.

For many years the Department has conducted investigations into the control of insects and diseases of forest trees. The limited silvicultural work carried on has aimed at maintaining a supply of trees suitable for planting on the prairies as shelter belts and to prevent soil and snow drifting. Basically this is also a soil conservation measure.

Much of the research and experimental work is concerned with crop plants, for after the soil itself, these are of chief importance. This work includes the breeding and testing of suitable varieties of crops to be grown under the varying climatic conditions throughout Canada. The culture and the nutritional value of crop plants and the suitability of food crops for human consumption—even their appeal or lack of appeal to a housewife—are continuously under study.

Livestock research includes mainly the feeding, care and handling of stock, its protection from insects and diseases and the production of suitable market and breeding types. A limited amount of work has also been done on the production of new strains of animals. Research and study of processed products such as milk, butter, cheese and meat and of fruits and vegetables is a most active item in the scientific work of the Department. Storage of agricultural products creates many problems that call for constant study.

Chemical and biological research and experimentation is chiefly of an applied nature. The Department does not specialize in so-called fundamental research involving the discovery of basic scientific phenomena and laws but concentrates on the adoption of known processes and the application of such processes to specific aims. Some discoveries bordering on fundamental research however are occasionally made, and extension of research is also made to some degree into the basic field where certain information is lacking in applied science.

Agricultural research, particularly in plant science, must be decentralized to a great extent as most problems must be studied where they occur. Apart from the value to farmers of having a local source of information the experimental farms and science laboratories are widely distributed because the work can be done in no other way. In addition to the headquarters of the Experimental Farms Service at Ottawa work is carried on at 32 branch experimental farms, 20 substations and two forest nursery stations. Experimental work of local application is done at 233 illustration stations. The work of the Science Service, centralized at Ottawa, is augmented by that of about 100 laboratories located throughout the country.

In the field of economic research, studies in farm management, land utilization, marketing and farm family living are undertaken in all parts of the country. The scope of the scientific and experimental work of the Department is revealed when it is realized that there is no plant or animal in Canada that is not susceptible to damage caused by bacteria, fungi, viruses, insects or parasites.

Subsection 3.—Protection and Grading

Unlike manufactured articles, even close scrutiny of most agricultural products is of little help in determining their purity as food, or their value to the farmer for further production. Products used as food must be pure and healthful and must satisfy standards of quality established for them. If agriculture is to be conducted on a sound basis, the supplies farmers buy—seeds, feeds, fertilizers and pesticides—also must carry a guarantee that they will be as represented. Much of the research and experimental work would be of no avail if legislation were not provided to ensure satisfactory end-products. In addition, Canada's livestock, crops and trees must be protected from diseases of foreign or domestic origin.

These protective and grading services are a most important part of the work of two sections of the Department of Agriculture: the Production Service and the Marketing Service. Generally the protective features and the grading to standards or approval of analyses of farm supplies come under the Production Service. The grading of most food products is the responsibility of the Marketing Service. Legislative authority to impose protective and grading services is derived from about 20 Acts or their accompanying Regulations.

Health of Animals.—The protection of the health of Canada's livestock is a most important service. To guard against the introduction of contagious diseases from foreign lands stringent regulations are enforced by the Health of Animals Division covering the importation of livestock, livestock products and even packing material and litter. Provision is also made for the control or eradication of animal diseases developing within Canada. The Division is responsible for the inspection of animals slaughtered for food and post-mortem examination is made of all carcasses in the course of slaughter and dressing before the meat is approved for human consumption. Sanitary conditions in packing plants and slaughter houses come under review and all canned meats must meet high standards of processing to qualify as food. The Division operates animal pathology laboratories which carry out routine laboratory examinations and conduct research investigations in animal disease problems.

Protection of Supplies.—The Plant Products Division, in co-operation with the provinces and other agencies, is concerned primarily with the administration of Acts respecting feeding stuffs, fertilizers, pesticides, hay and straw, fibre flax and binder twine, and the production of seed. The inspection services of the Division have three main functions: (1) to enforce the Acts that regulate the sale of the agricultural supplies; (2) to provide as required such services as seed crop inspection and the sealing of seed produced from inspected and other approved crops; (3) to co-operate with provincial governments and other agencies in promoting and improving supplies of seeds, feeds, fertilizers and pesticides.

Visual inspection is of little value for most of these products and laboratory testing is necessary; the laboratory services of the Division maintain branch offices across Canada. Testing seeds is a complex matter, for they must be tested for germination, variety, purity and freedom from weeds and other kinds of seeds before they are graded. All feeding stuffs, fertilizers and pesticides are subject to registration and this is refused if the use of products would be dangerous, if the ingredients or analyses are unsatisfactory or if the claims made regarding their value are incorrect or misleading.

Plant Protection.—The Division of Plant Protection functions with regard to plants and plant products much as the Health of Animals Division does with animals, and it administers the Destructive Insect and Pest Act. Imported nursery stock and plant material are all subject to inspection as protection against the introduction of insects and diseases. Extensive inspection is maintained within Canada to identify, localize and exterminate dangerous enemies of crops and trees. Provision is also made for the inspection of potato crops to be used for seed for domestic and export markets, and for the issuance of health certificates required for a wide range of plant products.

Standards and Inspection.—The Department has been steadily establishing and improving standards of quality for agricultural products for over fifty years. This work originated in an effort to improve the quality of export commodities and has gradually been extended to include many products that move in interprovincial trade. Most provinces have adopted these standards for enforcement on products marketed within their boundaries.

Grade standards are established and enforced for dairy products, meats, wool, eggs, poultry, fresh and processed fruits and vegetables, honey and maple products. These grades are widely recognized outside Canada and many Canadian foods and agricultural products command premium prices because of the strict quality standards maintained.

Dairy Products.—Producers, processors and consumers all derive benefits from grading and inspection services of the Dairy Products Division. Authority to carry out such services is contained in the Canada Dairy Products Act which establishes national standards for dairy products and regulates interprovincial and international trade. Grade names and standards are prescribed for cheddar cheese, creamery butter and dry skimmed milk and each of these products must be graded before entering into interprovincial or international trade. Dairy products for which grade names are not established, such as ice cream, evaporated milk and process cheese, are required to meet prescribed standards for composition, packing and marking before being exported from Canada, imported into Canada or moved from one province to another. Authority to carry on the grading and inspection of dairy products made and sold within the province of origin is derived from legislation passed by the province concerned.

Meats and Wool.—In addition to veterinary inspection of carcasses for wholesomeness, inspection and grading of meats for quality is of importance. All hogs slaughtered at inspected and approved plants are rail graded, that is, the farmer is paid on the dressed weight and quality of the carcass. All beef carcasses in inspected plants are graded and the better grades are marked with the national brands according to prescribed standards. Lamb and veal carcasses are graded on an optional basis. Wool is inspected and graded in registered wool warehouses.

Eggs and Poultry.—There are 1,243 registered egg grading stations for the grading and packing of eggs; and 43 registered egg breaking stations for the processing, grading and packing of frozen egg products. Registered poultry processing and eviscerating stations for the processing, eviscerating, grading and packing of poultry total 381. Because of a rapidly increasing demand for eviscerated poultry the quantity processed in registered processing and eviscerating plants has increased—from approximately 4,000,000 lb. in 1950 to 134,789,695 lb. in 1956.

Inspection of eggs, poultry and frozen egg products is compulsory on all sizable quantities intended for export, and also for interprovincial poultry shipments of 10,000 lb. or over. These products are also checked periodically for grade when offered for wholesale and retail sale. The sale of eggs by grade at retail is compulsory throughout Canada and the sale of poultry by grade at retail is compulsory in many of the larger consuming centres.

Fresh Fruits and Vegetables.—Grades are established for all principal fruits and vegetables produced in Canada. Practically all products for which grades are established must be inspected and certified if for shipment out of Canada. In addition, inspection and certification is compulsory on specified products if produced in certain provinces and shipped to another province. To provide this service, mostly seasonal in nature, a staff of inspectors is maintained throughout the foremost producing areas across Canada. In the larger distributing centres an inspection staff is maintained to administer grading, packaging and marking regulations at the wholesale and retail level, to collect and compile market statistics and to provide on request a commercial inspection service covering the quality or condition of produce received by the wholesaler. The shippers, brokers, commission houses and wholesalers dealing in fruits and vegetables in interprovincial, export or import trade must be licensed and are subject to established regulations.

Processed Fruits and Vegetables.—When special regulations covering canned fruits and vegetables were established under the Meat and Canned Foods Act in 1907, Canada became the first country to have any such legislation. Regulations under the Meat and Canned Foods Act now establish grades for practically all canned, frozen or dehydrated fruits and vegetables as well as for jams. Sanitary regulations are also established and are enforced by a staff of inspectors who provide an inspection service covering interprovincial, export or import movement of processed fruits and vegetables. This movement constitutes about 98 p.c. of the entire industry in Canada, the sales value of which amounted to approximately \$234,000,000 in 1955 as compared with \$20,000,000 in 1919. Although no grades are established in the regulations, the processing and packing of such products as pickles, olives, vegetable soups, etc., is also supervised and controlled. About 520 processing plants of one kind or another operate under a Certificate of Registration issued by the Department of Agriculture.

Honey.—Regulations are established for the classifying, grading and marking of all honey moving in interprovincial or export trade. Inspection is compulsory for honey being shipped out of Canada and administrative inspections for class and grade are made at the wholesale and retail levels on the domestic market. Interprovincial and export shippers and packers of pasteurized honey must be registered with the Department of Agriculture.

Maple Products.—Regulations are established for the prohibition of adulteration of maple products, for inspection and analysis, for proper identification of maple products and of 'colourable imitations' and for the licensing of manufacturers or packers and of all sugar bush operators operating in the interprovincial or export market. To enforce the regulations periodic inspection is made of the manufacturing plants, markets, stores and restaurants.

Subsection 4.—Canada's Relationship with FAO

According to the constitution of the Food and Agricultural Organization, the nations joining the Organization agree to promote the common welfare and contribute toward an expanding world economy by furthering separate and collective action for the purposes of raising levels of nutrition and standards of living of the people under their respective jurisdictions, securing improvements in the efficiency of the production and distribution of all food and agricultural products, and bettering the conditions of rural populations.

The FAO at its founding conference at Quebec City in 1945 started with 34 members; in 1957 there were 74 members. As new nations are born they may join the FAO. For example, Tunisia was admitted at the 1955 Conference and Morocco and Sudan joined at a special session of the 1956 Conference. The first Director-General of the FAO was Lord John Boyd Orr of the United Kingdom and the fourth and present incumbent is B. R. Sen of India who was elected in 1956.

The budget voted in 1945 for the first nine months of the new Organization's working year was \$2,000,000 and the 1957 budget was \$6,800,000. In addition to the latter amount, technical assistance funds (ETAP) totalled approximately \$9,144,000. Currently the staff of the Organization numbers about 1,600 persons, 600 of whom are working in over 40 country missions mostly as technicians.

FAO activities cover a wide field including agriculture, fisheries, forestry, nutrition, home economics, agricultural statistics, marketing and economics. A number of regional bodies have been created to facilitate work in special fields. About 85 p.c. of FAO activities represent direct assistance to individual governments, the remainder being composed of regional projects and services. The FAO arranges specialized training abroad for professional, technical and administrative officials from under-developed countries, and assists governments to organize in-service training institutes within their own countries. Since 1951, FAO has trained over 1,000 Fellows abroad and another 3,000 professional workers in regional and national training centres.

Commodity Review.—Progress in production of food and agriculture has been made since World War II, although it may not have been as great as desired nor equal among all countries. Production during 1956 rose sharply in North America and Oceania, the regions already most troubled by surpluses, but otherwise, apart from a substantial gain in the Far East, production showed little change and in some cases declined.

The disposal of agricultural surpluses remains one of the most pressing commodity problems facing the FAO and the scale of special disposal programs has been stepped up. The agency within the FAO directly responsible for a review of the commodity situation is the Committee on Commodity Problems (CCP) which carries out FAO responsibilities of analysis and interpretation of the international commodity situation and advises on suitable action when appropriate.

Over the past two years the Committee has more intensively applied the policy of setting up commodity study groups such as those on wheat and other grains, cocoa, coffee, dairy products, coconut, olive oil, and hard fibres. The CCP also convened an expert working group on agricultural support measures. Canada has been represented on the working parties dealing with grains, dairy products and price supports, and has been following closely the developments in the other commodity working groups.

In addition, the Consultative Sub-Committee on Surplus Disposal, located at Washington, U.S.A., is holding a watching brief in connection with programs having to do with the disposal internationally of surplus agricultural commodities. The Sub-Committee provides a forum for discussing complaints and problems. Principles governing the disposal of surpluses are: to increase consumption rather than to restrict supplies; to dispose of excess stocks in an orderly manner so as to avoid any undue pressure resulting in sharp falls of prices on world markets, particularly when prices of agricultural products are generally low; where surpluses are disposed of under special terms, to undertake that such arrangements be made without harmful interference with normal patterns of production and international trade.

Another consultative sub-committee deals with the economic aspects of rice, paying particular attention to trade matters and to any special difficulties which exist or are likely to arise in the international trade in rice.

The CCP and its Washington Sub-Committee have had under consideration such matters as the establishment of national food reserves and the use of surpluses for economic development. Progress has been slow but a number of nations did get together and

devise a plan of utilizing surplus dried milk. A scheme is under development in Calcutta, India, with the financial backing of several countries. Canada has indicated its willingness to participate in this scheme and has also agreed to take part in the survey of dairy needs in the city of Karachi.

Canada and the FAO.—Canada is one of the founding members of the FAO and is a member of the Council, the Committee on Commodity Problems and the Consultative Sub-Committee on Surplus Disposal. Canada has also participated in a number of working parties sponsored by FAO dealing with a variety of problems and is represented on the Co-ordinating Committee.

More than 50 Canadians have been on technical assignments since 1951. For some of these experts there were repeat assignments. Others have been invited to participate on panels of experts dealing with nutrition, plant protection, forestry and fisheries. A number of Canadians are on the staff at Headquarters.

Canada's financial contributions are at present the fifth largest, representing 4.6 p.c. of the present FAO budget; the first four in order of size of contributions are the United States, the United Kingdom, France and West Germany. Canada's financial contribution to FAO Headquarters' budget since the beginning has ranged from \$190,000 to \$338,000 annually. In addition, Canada contributes to FAO's technical assistance work through its annual payment to the UN Technical Assistance Fund. In 1957 this contribution totalled \$1,800,000.

Section 2.—Provincial Governments in Relation to Agriculture*

Subsection 1.—Agricultural Services

Newfoundland.—Government agricultural services in Newfoundland are operated by the Agricultural Division of the Department of Mines and Resources. The Division is in charge of a Director who is assisted by a staff of 21 officers. For purposes of administration, the Province is divided into nine districts. A fieldman with permanent headquarters is located in each district except Labrador, where the officer is resident for the summer only. Officers in charge of different phases of agricultural development visit each district on assignments from the St. John's office.

Departmental policies in support of the agricultural industry include: assistance in the clearing of land with government-owned and -operated tractors; a bonus of \$125 an acre on land cleared by privately owned equipment; the distribution of ground limestone at a subsidized rate; the payment of bonuses on purebred sires; and financial assistance to agricultural societies, marketing organizations and exhibition committees. An inspection service is provided for poultry products, vegetables and blueberries, production of the latter being encouraged by the burning of suitable berry areas and the improvement of roads and trails leading to them. Small fruit development generally is promoted through the distribution of quality foundation stock.

Every encouragement is given to the production of livestock. An experimental sheep flock is maintained. Poultry and beef production have increased with favourable marketing conditions and with departmental assistance and loans under the Provincial Farm Development Loan Act. Two veterinarians supervise the health of animals program and the joint federal-provincial project for the eradication of bovine tuberculosis.

The Agricultural Division co-operates with the Department of Education in furthering the 4-H Club movement in the Province and accepts responsibility for all projects pertaining to agriculture.

Prince Edward Island.—The activities of the Provincial Department of Agriculture are suggested by its staff which includes, in addition to the Minister and Deputy Minister, a Dairy Superintendent and Assistant, two Check Testers, a Director of Veterinary Services and six subsidized practicing Veterinarians, a Horticulturist, a Soil Analysis Assistant, a Poultry Director, an Agronomist, a Director of Field Work and three Agricultural

* Information supplied by the agricultural authorities of the various provinces.

Representatives, a Chief Forester and Assistant, a Director of Farm Improvement, a Nursery Supervisor, and a Director, an Assistant Director and two Extension Workers of Women's Institutes.

Nova Scotia.—The Department of Agriculture and Marketing endeavours to "help the people to help themselves" through strengthening member interest in such organizations as the Nova Scotia Federation of Agriculture, Nova Scotia Fruit Growers' Association, various agricultural co-operative organizations, credit unions and producer organizations. The Department is assisted by the Nova Scotia Advisory Committee on Agricultural Services which has been established to promote agricultural policies and projects of the Federal and the Provincial Departments of Agriculture. The Committee meets quarterly to determine how the work of these Departments may be co-ordinated and directed through integrated agricultural policies and with a minimum duplication of services.

New Brunswick.—Provincial Government agricultural policy in New Brunswick is directed by the Department of Agriculture. The Department is headed by the Minister of Agriculture who is assisted by a Deputy Minister and the Directors of the following services: extension, livestock, dairy, veterinary, poultry, horticulture, field husbandry, soils and crops, plant protection and promotion, agricultural engineering, home economics, Credit Union Co-operative Association, agricultural education, apiculture, and agricultural societies.

Quebec.—The Department of Agriculture of Quebec comprises eleven services: rural education, rural economy, extension, animal husbandry, horticulture, field husbandry, information and research, home economics, animal health, rural engineering and the secretariat. Each service is divided into sections dealing with particular problems.

The Department also includes many other special organizations such as the Research Council, the Dairy Industry Commission, the Dairy School of St. Hyacinthe, the Provincial Extension Farm (Deschambault), the Fur Bearing Animals Extension Farm (St. Louis de Courville). The Farm Credit Bureau, the Quebec Sugar Refinery (St. Hilaire) and the Veterinary College (St. Hyacinthe) are also under the authority of the Minister of Agriculture and the Office of Rural Electrification is connected with the Provincial Executive Council.

The annual competition for the Agricultural Merit Order, organized in 1890, is held successively in each of five regions. Each contest lasts five years and covers the various farm products; its main objective is to ascertain the personal merit of the competitors who have most distinguished themselves and can serve as examples. County Farm Improvement Contests have been conducted for more than twenty-two years and are still very popular. Over 6,000 competitors have already benefited from these contests which promote better methods of culture designed to increase farm income.

The Drainage Service deals with soil improvement or land reclamation by dredging the large watercourses with its own equipment or under contract and by renting equipment at very low rates to farmers who want to improve their croplands. The Department of Agriculture also gives assistance in the form of grants towards such projects. Soil improvement measures include large drainage projects carried out by the Department and smaller projects carried out by groups of farmers with government help. In 1955, 32,410 farmers benefited from help given by this Service.

Various forms of assistance are offered towards improvement of crops and livestock. An artificial insemination station operates at St. Hyacinthe for the benefit of breeders' clubs, and plant breeding stations for cereal and forage crops, vegetables and small fruits are maintained in a number of localities. Trained specialists are employed in the work of controlling plant and animal pests and diseases; the main laboratories are situated at Quebec City and field laboratories are located in different districts or in schools.

Agricultural co-operation is widespread in Quebec. There are 542 co-operatives with about 68,000 members and 89 agricultural societies with 28,865 members to serve local interests and organize county exhibitions. There are also 726 Cercles de Fermières

(Women's Institutes) in operation with a membership of 41,000; 458 farmers' clubs with a membership of 22,042, and 142 junior farmer clubs where 4,062 young boys and girls are working on numerous practical agricultural projects.

The Farm Credit Bureau was established in 1936. During 20 years of operation the Bureau has made 45,238 loans to the farmers of Quebec amounting to a sum of \$120,000,000; 21,006 of these loans were for the establishment of young men on farms.

Ontario.—The Ontario Department of Agriculture provides financial assistance and administrative services to agriculture through its Head Office, twelve branches, three experimental farms, two demonstration farms, and through research and extension work carried on at the four educational institutions under its administration. Head Office, in addition to general administration, administers policies providing assistance to farmers and settlers in northern Ontario in connection with land breaking and clearing and improvement of farms and livestock.

The Live Stock Branch promotes livestock improvement policies, licenses and examines stallions and gives support to purebred livestock associations.

The Field Crops Branch assists in the development of good cultural practices and promotes the use of improved strains of seed, the improvement of pastures and the eradication of weeds.

The Dairy Branch provides an inspection, instruction and supervision service to all dairy factories and promotes the production of clean milk on farms.

The Farm Economics Branch conducts cost studies on agricultural production in co-operation with agricultural organizations.

The Fruit Branch enforces fruit and vegetable regulations, provides information to growers and administers the Co-operative Loans Act.

The Co-operation and Markets Branch administers the Farm Products Marketing Act, the Ontario Food Terminal Act and the Farm Products Containers Act.

The Milk Control Board, under the Milk Industry Act, regulates and supervises the marketing of fluid milk.

The Agricultural and Horticultural Societies Branch gives assistance to agricultural and horticultural fairs and exhibitions, ploughing matches and other competitions, and administers the Community Centres Act.

The Extension Branch carries on an educational and extension service through agricultural representatives located in all counties and districts and gives direction to 4-H Club work and the Ontario Junior Farmers' Association. Through the Home Economics Service, the Extension Branch gives leadership and direction to organized activities of rural women.

The Statistics and Publications Branch, in co-operation with the Dominion Bureau of Statistics, provides a crop-reporting service and gathers and disseminates data on crops, livestock and dairy products.

The Ontario Junior Farmer Loan Branch administers the Ontario Junior Farmer Establishment Act.

The Horticultural Experiment Station at Vineland, the Western Ontario Experimental Farm and Agricultural School at Ridgetown, the Demonstration Farm at New Liskeard, the Kemptville Agricultural School, the Ontario Agricultural College including Macdonald Institute, and the Ontario Veterinary College at Guelph, all under the administration of the Department, provide research and extension services to Ontario agriculture.

The Ontario Department of Agriculture is also responsible for the administration of the Ontario Telephone Authority.

Manitoba.—The Department of Agriculture serves Manitoba through the following branches: agricultural extension; livestock; dairy; soils and crops; agricultural publications and statistics; weeds administration; co-operative services; and the provincial veterinary laboratory.

The Extension Service deals with agricultural economics, horticulture, poultry, agricultural engineering, beekeeping, 4-H Clubs and women's work, and has specialists devoting attention to these subjects. Meetings, field days and short courses are held. Thirty-five agricultural representatives are located throughout the Province, each serving from one to five municipalities; twelve home economists serve designated areas.

The Live Stock Branch administers the Animal Husbandry Act, develops and administers policies that encourage the improvement and production of livestock, and works in close co-operation with the Veterinary Laboratory Service and the Federal Health of Animals Division in the control of livestock diseases.

The Dairy Branch administers the Dairy Act, supervises the grading of cream, inspects creameries and cheese factories, gives instruction in cheese and butter making, issues licences to makers of dairy products and to cream graders and conducts a dairy-cost study among milk producers. Extension activities include addressing meetings and preparing articles and leaflets on dairy farm problems.

The Soils and Crops Branch deals with grain and forage crops, conservation and fertility and provides liaison between the Province of Manitoba and the Government of Canada in regard to PFRA projects. The Branch develops and administers policies that encourage good field crop husbandry and conservation practices.

The Agricultural Publications and Statistics Branch publishes and distributes annually approximately 100,000 bulletins, circulars, posters, leaflets, etc.

The Weeds Administration Branch directs the activities of 18 municipal weed control units comprising 70 rural municipalities engaged in eradicating deep rooted, persistent, perennial weeds; supervises weed demonstrations; investigates weed problems; conducts weed surveys; and prepares weed literature, radio addresses, articles, pictures, mounted weed specimens, etc.

The Co-operative Services Branch takes care of the registration and supervision of co-operatives and credit unions and the administration of the Acts governing them. The Branch also collects and compiles statistics on co-operative activity throughout the Province.

The Veterinary Laboratory operates a diagnostic laboratory for animal diseases, the services of which are available to veterinarians and livestock owners.

Saskatchewan.—The Saskatchewan Department of Agriculture is organized in the following branches and services.

The Administration Branch handles general staff records and accounts. Data on crop conditions, production, marketings and income are collected and farm information dispensed daily over seven private radio stations.

The Agricultural Representative Service has a field staff of 37 agricultural representatives, four area supervisors and specialists in farm management and visual aids. An extension field staff is provided for all Branches of the Department as well as for the other agencies operating within the Co-operative Agricultural Extension Program. Agricultural representatives are active in all federal, provincial and university farm services. In farm labour matters co-operation is maintained with the Federal Department of Labour and the National Employment Service in directing annual movements of farm labour in and out of the Province. Agricultural representatives work through Agricultural Conservation and Improvement Committees in each rural municipality and local improvement district to supply the farmer with scientific and practical information. Committees study local farm problems and initiate improvement programs. Through an Earned Assistance Program the Department pays one-half the cost of local group development projects.

The Animal Industry Branch has four divisions. The Dairy Division administers dairy herd improvement programs and assists producers with management and production problems; inspects and licenses dairy manufacturing and frozen-food locker plants; and administers dairy, locker plant and margarine legislation. The Livestock Division encourages the use of suitable animals for breeding purposes by the establishment of purebred

sire areas and by assistance in the purchase and distribution of stallions, bulls, boars and rams. It registers brands, licenses livestock dealers and agents and promotes programs on insect control, feeding and management. The Poultry Division maintains flock testing and turkey grading services; administers an approved hatchery policy, licenses produce dealers and poultry buyers, hatcheries and hatchery agents. It also assists with poultry shows and field days and otherwise promotes flock improvement. The Veterinary Division assists students in veterinary science under a scholarship plan, administers disease testing and vaccination programs and co-operates with Federal Government officials and local veterinarians in disease prevention and control.

The Conservation and Development Branch provides engineering services for irrigation development, usually in co-operation with the Federal Government, and for drainage programs and projects. Reclamation of land by drainage, development of misused land and under-utilized land, and construction of provincial community pastures all come within its jurisdiction. The Branch administers the Farm Implement Act and provides engineering assistance to conservation and development areas, water users' districts, and irrigation districts in connection with water control projects.

The Lands Branch administers all Crown, school and Land Utilization Board lands except forest reserves and parks in the settled area of the Province; classifies it according to the use for which it is best suited; disposes of such lands under long-term leases; secures land control for land utilization projects; supervises new settlement projects and operates provincial community pastures.

The Plant Industry Branch organizes and administers programs for crop improvement and crop protection, and advises on seed and crop improvement, soil conservation, horticultural problems, weed control and management of irrigated land. The improvement of grassland is promoted through a forage crop program. The Seed Plant Division carries on custom cleaning of forage seeds and registered cereals. The Apiary Division advises on beekeeping and honey production, supervises and carries on continuous inspection.

Alberta.—The Alberta Department of Agriculture is organized in the following branches and services.

The Field Crops Branch administers programs and policies relating to crop improvement, soil conservation and weed control, crop protection and pest control, horticulture and apiculture. Agricultural Service Boards have been organized in municipal districts to assist with agricultural programs, and the Department of Agriculture is represented on each Board.

The Live Stock Branch aids in maintaining the quality of herds and flocks by assisting farmers in securing purebred herd sires and assists artificial breeding associations in the breeding of dairy cattle. The Branch also supervises livestock feeder associations and administers legislation relating to stock inspection, brands, domestic animals and the sale of horned cattle.

The Dairy Branch administers the Dairymen's Act and the Frozen Food Locker Act. Grading and purchasing of raw produce by all dairy plants are under regulation, as are standards of construction, manufacture, processing, sanitation, and temperature control for dairies and frozen food lockers. A regular cow-testing service is available to dairy producers and the Branch laboratory conducts chemical and bacteriological analyses needed for industrial directives. Yearly cost studies and dairy farm management services are in operation in the principal milk-producing areas.

The Poultry Branch carries on programs for the improvement of poultry husbandry and supervises flock approval for the control of pullorum disease. The Branch issues hatchery, wholesale, first receiver and truck licences for the handling of poultry products.

The Veterinary Services Branch provides scientific diagnoses of livestock and poultry diseases through its laboratory; conducts investigations of disease conditions; lectures in veterinary science at the University of Alberta, Schools of Agriculture, and many meetings; and promotes government policies aimed at reducing losses throughout the Province.

The Agricultural Extension Service operates 43 offices and employs the services of 56 districts agriculturists and 20 district home economists. The district agriculturists assist farmers with their problems and advance departmental policies designed to improve the standard of agricultural practices. The district home economists provide a similar service for farm women. Bulletins are prepared dealing with agricultural and home economics topics. The Branch is responsible for the supervision of agricultural societies and, in co-operation with the Federal Department of Labour, is concerned with recruitment and placement of farm labour.

The Fur Farms Branch administers the licensing and exporting of live animals and pelts, and assists fur farmers in care, management and stock improvement.

Schools of Agriculture and Home Economics are operated at Olds, Vermilion and Fairview (see p. 412).

A Radio and Information Branch conducts five broadcasts a week over seven radio stations and issues weekly bulletins to press and radio.

The Water Resources Branch deals with water rights, drainage, irrigation, and water power development.

The Land and Forests Utilization Committee, composed of representatives from the Department of Lands and Forests, Power Commission, Department of Municipal Affairs, University of Alberta and the Department of Agriculture, deals with the proper use of submarginal agricultural land.

British Columbia.—The Department of Agriculture has four main branches. The Administrative Branch is responsible for the general direction of agricultural policies, administration of legislation affecting agriculture and for the compilation of reports and publications. This Branch also maintains direct supervision of the Field Crops, Soil Survey, Plant Pathology, Entomology, Apiary, Markets and Statistics, Farmers' Institutes and Women's Institutes Branches.

The Livestock Branch engages in the promotion and supervision of the livestock industry and provides veterinary services affecting disease control regulations as well as supervising stock brands, inspection of dairy and fur farm premises, and inspection of beef grading. The Branch also supervises the operations of the Dairy Branch in the inspection of commercial dairy premises. Officials are stationed at 11 centres throughout the Province.

The Horticulture Branch supervises fruit, vegetable and seed production, and provides advice on plant diseases and insect pest control. The Branch maintains field offices at 11 points in the southerly section of the Province.

The Agricultural Development and Extension Branch offers general information services to farmers through 20 offices which cover all major farming districts. In addition, this Branch provides agricultural engineering service, supervision of the Government land clearing program, farm labour services and promotion of junior club projects. The Poultry Section of the Branch offers extension services to the poultry industry.

Subsection 2.—Agricultural Colleges and Schools

All provinces provide facilities for training in agricultural science at university level. Such colleges are administered by either the Department of Agriculture or the Department of Education of the respective province.

Newfoundland.—There are no agricultural colleges in the Province, but the Agriculture Division of the Department of Mines and Resources provides a number of scholarships annually for young men to attend agricultural colleges in other provinces.

Prince Edward Island.—A two-year course in scientific agriculture offered at Prince of Wales College, Charlottetown, prepares students for third year at Macdonald College, Que.

In the Vocational School short courses provide knowledge and skill in agricultural pursuits and develop in the student a sense of the dignity and importance of agriculture as a calling and an understanding of the importance of the industry to the Province.

Nova Scotia.—The Nova Scotia Agricultural College at Truro offers three courses: the first two years of a degree course in agriculture; a two-year course in general agriculture; and a two-year course in vocational agriculture. The College assists in conducting short courses at various provincial centres, supports Folk Schools and gives direction to 4-H Club organizations. Tuition is free for Canadian students.

New Brunswick.—The Province's four Agricultural Schools are located at Woodstock, Fredericton, St. Joseph and St. Basile. Two-term agricultural courses extending over five months each year are offered at St. Joseph, Fredericton and St. Basile and at Woodstock a three-year course is conducted. The curriculum includes training in all phases of agriculture, shop and general academic work. Ten-month home economics courses are also offered at Woodstock and St. Joseph.

Quebec.—Courses in agricultural schools in Quebec include a four-year university course leading to a degree of Bachelor of Science in Agriculture at the following universities: Laval Faculty of Agriculture (Ste. Anne de la Pocatière); L'Institut Agricole d'Oka (affiliated with the University of Montreal); and McGill Faculty of Agriculture (Macdonald College). At the Provincial Veterinary School (St. Hyacinthe), affiliated with the University of Montreal, a four-year course is offered leading to a Doctorate in veterinary medicine. There are nine secondary agricultural schools throughout the Province, and ten regional schools and six orphanages offer courses in agriculture. More than 1,500 students, the great majority of whom are sons of farmers, attend these intermediate and regional schools of agriculture and in the orphanages 150 pupils follow practical agricultural courses. A farm is always annexed to the school for practical training and specialists give instruction on the maple sugar industry, farm mechanics, co-operatives, plant protection, veterinary hygiene, aviculture, marketing and silviculture. School co-operatives and clubs are organized and directed by the pupils under the supervision of their professors. Household science training for the daughters of farmers and settlers is given in five of these schools.

Ontario.—The two-year course of the Ontario Agricultural College for the Associate Diploma in Agriculture provides basic training in agriculture. Young persons interested in making agriculture their vocation study the application of science to agricultural practice and receive training for rural citizenship.

The four-year course for the degree of Bachelor of Science in Agriculture gives fundamental education in the science of agriculture. A sound training is provided for farming as a profession, for entrance into government extension and allied agricultural services, agricultural industry, teaching and, for those who wish to proceed to graduate studies, for the Master's and Doctorate degrees.

Graduate courses are offered leading to the degree of Master of Science in Agriculture. Graduate students are enrolled in a department or departments of the Ontario Agricultural College conjointly with a department or departments of the University of Toronto for advanced courses of study and training in experimentation and scientific investigation. M.S.A. graduates may go into teaching, research, or for further postgraduate study.

Macdonald Institute offers young women a one-year course of practical training in the art and science of homemaking. This earns a diploma of merit but gives no professional standing. A four-year professional course is available leading to a Bachelor of Household Science degree granted by the University of Toronto. University matriculation standing is necessary to enter the four-year course.

The Ontario Veterinary College offers a five-year course leading to the degree of Doctor of Veterinary Medicine. In addition to its function as a teaching institution, the College is a research centre for diseases of animals and provides free consultation for veterinary surgeons in practice as well as extension services in the interests of the livestock industry.

The Kemptville Agricultural School offers diploma courses as follows: a two-year diploma course in agriculture (two terms of six months each) giving practical training in modern farm methods designed primarily for young people who wish to farm but serving also as a preparation for many other occupations closely connected with agriculture (stress is laid on the development of community leadership); one year advance course in agriculture mechanics for diploma graduates in agriculture; a one-year diploma course (six-month session) leading to a diploma in homemaking and qualification for the less exacting positions in fields of home economics; a two-year diploma course (two terms of six months each) for girls wishing to prepare for positions in the tourist trade, food services, sewing centres and other fields of home economics; a three-month winter course for all dairy apprentices leading to the Dairy School Diploma required for certified buttermakers, cheesemakers and operators of dairy manufacturing plants. A 450-acre school farm and residence life are features of the Kemptville Agricultural School.

Western Ontario Agricultural School offers a practical course for young men who propose to return to farming. It consists of two winter courses of 20 weeks each, starting late in October and ending late in March. All subjects relating to agriculture are included in the curriculum.

Manitoba.—The Faculty of Agriculture and Home Economics of the University of Manitoba offers degree courses in agriculture and home economics as well as the two-year, sub-collegiate diploma course in agriculture. Practical one-season courses in agriculture and homemaking are also given at the Brandon Agricultural and Homemaking School. Graduates in agriculture from this School are admitted to the second year of the diploma course at the University.

Saskatchewan.—Saskatchewan offers a degree course in agriculture designed to meet the needs of those who intend to teach agriculture in secondary schools or colleges, to engage in research or administrative work, or to farm. Specialization is possible with permission of the faculty. Provision is made for combined courses in agriculture and arts or commerce. Postgraduate courses are available.

The Saskatchewan School of Agriculture offers a practical course intended to give sound training in farm practice and also to train young men to become rural leaders.

All courses leading to a degree in home economics require four years. The prescribed course of studies for the first two years is the same for all pupils but in the third and fourth years four types are offered: (1) for teachers, (2) for dietitians, (3) general, and (4) additional specializations. A combined course leading to a degree in arts and science and in home economics requires at least five years.

Alberta.—The University of Alberta offers a four-year degree course in agriculture to students with senior matriculation or its equivalent. Students may elect a general program or major in a wide range of special courses in the fields of animal science, economics, entomology, dairying, plant science, and soils. Graduate work at the Master's level is offered in all departments and at the Doctorate level in some.

The Alberta Schools of Agriculture and Home Economics, located at Olds, Vermilion and Fairview, offer practical courses in agriculture and homemaking. The purpose of the schools is to train young men for farming and young women for homemaking. Boys and girls must have Grade IX standing for entrance into the regular two-term course. A one-year course is offered to those who have 70 or more high school credits. Modern living accommodation is provided as well as auditorium and gymnasium facilities.

During the summer months the schools are used for agricultural meetings and conferences of organizations that are connected with agriculture. During the month of July, leadership courses, 4-H Club gatherings, farm camps and other events keep the facilities in constant operation.

British Columbia.—The Faculty of Agriculture at the University of British Columbia offers a four-year general degree course in agriculture and a five-year honours course. In the honours course there are 15 fields in which a student may specialize. Work is also offered by the Faculty of Agriculture in the Faculty of Graduate Studies through

which a student may proceed to the degrees of Master of Science in Agriculture and Master of Science; in a limited number of fields, work is offered at the Doctorate level. The Faculty also offers a one-year or two-year diploma course in occupational agriculture, adaptable to the needs of individual students.

In co-operation with various branches of the provincial Department of Agriculture and under the auspices of the University Extension Department, the Faculty of Agriculture also offers a number of short courses which vary in length from one or two days to several weeks.

Section 3.—Agricultural Irrigation and Land Conservation

Subsection 1.—Federal Projects*

Prairie Farm Rehabilitation Act

The Federal Government passed the Prairie Farm Rehabilitation Act in 1935 authorizing an expenditure of \$4,750,000 over a five-year period to provide for the rehabilitation of the drought and soil drifting areas in the Prairie Provinces. An amendment in 1937 extended the scope of the program by providing for the withdrawal of poor quality lands from cultivation and the resettlement of the farmers operating such lands. A further amendment in 1939 removed the limitation as to time and amount of expenditure. The policies and projects carried out under the Act vary widely in nature and scope but each has as its objective the better utilization of land to minimize the problems of drought, or the conservation of water for farm purposes.

Special votes have been passed by Parliament from time to time for the development of large irrigation projects in the Prairie Provinces and land reclamation and development works, including flood control, which because of their size are not included in the PFRA appropriation. These works, however, are carried out by the PFRA organization, which has its head office in Regina, Sask. Most of the large undertakings under the special votes are carried out and financed jointly with the provinces under agreements setting out the responsibilities of each party in the development work.

Water Conservation Projects.—PFRA provides engineering and financial assistance to farmers in the construction of water conservation works as a rehabilitation measure within drought areas of the three Prairie Provinces. The amount of financial assistance awarded is largely dependent upon the type and size of the project contemplated. At all times PFRA policy is to provide assistance to farmers to rehabilitate themselves. Authority to proceed with construction is secured through the respective provincial water rights departments.

During 21 years of operation PFRA has provided assistance to farmers to construct 52,461 individual farm dugouts and small dams, many of which are suitable for irrigation. These projects have extended widely the benefits of water throughout the dry areas. Adequate water storage facilities have been provided where water shortages exist and dependable water supplies assured, through irrigation for domestic requirements, for stock watering and for the production of livestock feed. Thus a great many farmers have been rehabilitated on their present holdings.

The development of community projects is necessarily confined within the narrow reaches of well-defined watersheds where sufficient water resources are available. Where a group of farmers organizes a water users' association or a rural municipality provides leadership in an irrigation or water storage project, PFRA co-operates with the local body. The usual procedure is for the Government of Canada to assume the capital cost of storage and connecting works and the provincial body to assume the responsibility for the distribution of water to the land or along the watershed. The local body also undertakes maintenance and operation.

* Prepared under the direction of Dr. J. G. Taggart, C.B.E., Deputy Minister of Agriculture, by G. J. Matte, Associate Director of Rehabilitation.

To Mar. 31, 1956, PFRA provided the necessary assistance to construct 357 community projects, the majority of which are located on six watersheds originating in the three Prairie Provinces. These projects conserve the surplus spring runoff water to supplement short supply later in the year. Community projects also provide homes for farmers moved from submarginal areas to where they can be assured a livelihood.

PFRA's responsibility for the development of large community irrigation schemes terminates with the construction of primary reservoirs and connecting canals. However, where the need for early returns to farmers proved imminent, PFRA has assisted further in the development of the irrigable land and has maintained a constant surveillance of the project's operations and progress. At times agreement has been reached between PFRA and the provincial government concerned whereby PFRA provides engineering and financial assistance to construct primary works and the province agrees to assist with the development of the irrigable area. Such an agreement is in effect in connection with sections of the Swift Current Irrigation project being developed in Saskatchewan.

Major Irrigation Projects.—*St. Mary Irrigation Project.*—The St. Mary Irrigation project was undertaken by agreement between the Government of Canada and the Province of Alberta. The Government of Canada agreed to construct the main supply reservoirs and connecting works. The Province undertook the responsibility for construction of the auxiliary reservoirs and distribution system from the main works to the land. The St. Mary River System is by far the most important irrigation project undertaken in Canada and, when completed, will irrigate an area of approximately 510,000 acres. Construction of the St. Mary Dam, key structure on the whole project, was completed in 1951. It is 195 feet high and 2,536 feet wide and creates a reservoir capable of storing 320,000 acre-feet of water. Approximately 200 miles of main canal have been built.

South Saskatchewan River Development.—This development in central Saskatchewan is a proposed multi-purpose project to be used for developing power and irrigation, the irrigable area lying between the town of Elbow and the city of Saskatoon. The key structure on the project will be a dam on the South Saskatchewan River located at a point midway between the towns of Outlook and Elbow.

The plan is to stabilize agriculture in the south central area of the Province where prolonged droughts have created serious economic problems for over 50,000 farmers. Full use will be made of the river's control, power, urban water supply and recreational benefits.

Bow River Irrigation Project.—The Bow River project was purchased by the Government of Canada in 1950 from the Canada Land and Irrigation Company, a private British interest. Development of this project will ensure water supply to 100,000 acres of land at present irrigated and will bring an additional 140,000 acres of provincial and privately owned lands "under the ditch". Work has progressed rapidly on construction and the repair and enlargement of old structures. The Government of Alberta is responsible for the construction of the distribution system for provincial and privately owned lands (see p. 417).

Red Deer Irrigation Project.—The proposed Red Deer River development concerns the irrigation of an estimated 400,000 acres of land located in the east central part of Alberta. The project will consist of a dam on the Red Deer River at Ardley and about 100 miles of main canal to two main reservoirs—Craig Lake and Hamilton Lake. The dam will contain power installations to produce power for pumping and also for sale commercially. An estimated 20,000,000 kwh. of water power will be available for sale when power is fully developed.

British Columbia Projects.—Irrigation development in British Columbia has been undertaken in connection with the Veterans' Land Act and at the request of the British Columbia Government. Three projects (the Chase irrigation project and the Johnstone Western Canada ranching projects No. 1 and No. 2) have been completed within the South Thompson Valley area. On these projects 809 acres of land have been developed for irrigation for the benefit of approximately 40 veterans of World War II.

In the Okanagan Valley three new projects have been completed, the Westbank irrigation project and the Bankhead project near Kelowna, and the Cawston Benches project located east of the town of Keremeos. The three projects irrigate 1,782 acres of land and provide locations for 170 veterans of World War II. The Penticton West Benches project, irrigating approximately 200 acres and accommodating 97 veterans on small holdings was completed in 1953.

Intensive farming is practised in the Okanagan and South Thompson Valleys. The land developed for irrigation by PFRA is used mainly for the growing of small fruits and vegetables and for dairying.

Reclamation Projects.—*Riding Mountain Reclamation Project.*—At the request of the Manitoba Government extensive investigations have been undertaken by PFRA in the Riding Mountain area where a serious flood problem exists on a number of streams flowing off the north and east slopes of Riding Mountain and Duck Mountain. The land area affected by flooding is in the neighbourhood of 252,000 acres. The cost of reclamation is borne jointly by the Governments of Canada and Manitoba. Construction work consists of clearing and dyking stream channels, prevention of streambank erosion, and aligning channels by building cutoffs and diversions.

Assiniboine River Project.—This project is being undertaken by PFRA at request of the Manitoba Government to prevent flooding on the Assiniboine River, particularly between Brandon and Virden and between Portage la Prairie and Headingly, where thousands of acres of valuable agricultural land have been inundated repeatedly. Detailed study is being given to water runoff data in the Assiniboine River Drainage Basin, and the building of water storage works on the headwaters of the Assiniboine River is under way.

Saskatchewan River Reclamation Project.—Surveys and investigations were made by PFRA to determine the possibility of successfully reclaiming land for agriculture in the Pasquia area of the Saskatchewan River delta region near the town of The Pas in Manitoba. As a result an agreement was reached early in 1953 between the Government of Canada and the Province of Manitoba for the construction of the necessary reclamation works to protect the area from flooding and to settle about 96,000 acres of suitable land—the Government of Canada to assume the cost of building the main protective works, and the Province the costs of settlement, maintenance of works, and internal drainage. One-half of the reclaimed land is to be reserved for the resettlement of farmers from drought areas and the remainder is to be sold. Part of the proceeds from the sale of the lands will go to the Federal Government as a partial reimbursement of the costs of building the main protective works. Construction began early in 1953.

Lillooet Valley Reclamation Project.—This project was undertaken upon agreement between the Government of Canada, the Government of British Columbia and the Pemberton Valley Reclamation District and is located in the Lillooet River Valley above and below the town of Pemberton. Its objective is to protect lands now under cultivation from flooding and to reclaim additional lands by dyking and drainage. The land so far reclaimed amounts to 14,000 acres, which allowed farmers in the district to increase their holdings and permits the settlement of hundreds of additional inhabitants.

Land Utilization.—In addition to cultivation and water conservation activities, rehabilitation of drought areas involves the conversion of large tracts of land (proved unsuitable for crop production) to livestock production through cultivation of a permanent grass cover and the relocation of farmers residing thereon. To this end the PFRA land utilization program has constructed 62 operating pasture units, resulting in the reclamation of 1,712,240 acres of submarginal land. During the year ended Mar. 31, 1956, summer grazing was provided for 108,537 head of livestock owned by 5,632 patrons living on lands adjacent to these pastures.

An extensive improvement program is in effect on all pastures and is begun as soon as new areas are enclosed. This policy has more than doubled the 1938 average carrying capacity on pasture land. The improvement policies most extensively practised in al

pastures are: regrassing—since 1938 approximately 193,083 acres of land in community pastures have been regrassed; development of stock watering sites—to Mar. 31, 1956, over 1,000 stock watering dams, dugouts and wells have been constructed in community pastures; and pasture management and controlled grazing.

Maritime Marshlands Rehabilitation Act

The marshlands of Prince Edward Island, Nova Scotia and New Brunswick are among the more productive soils in Canada when protected from tidal flooding and properly cultivated. They are composed of deposits laid down by tidal waters and are for the most part adjacent to the Bay of Fundy.

The initial areas were reclaimed as early as 1630 and since that time about 80,000 acres have been protected by dykes and aboiteaux, but through a variety of circumstances—loss of cattle markets, loss of hay markets and the increase in labour costs—maintenance of these protective structures was not adequately carried out and deterioration resulted. Because the marshlands, when protected, are important in the agricultural economy of the provinces concerned, the Government of Canada and the Provincial Governments of Nova Scotia and New Brunswick passed legislation permitting a program of reclamation and rehabilitation of these lands. The federal Act (the Maritime Marshlands Rehabilitation Act) was passed in 1948 and complementary provincial marshland reclamation Acts were passed by the Nova Scotia and New Brunswick Governments in 1949. These Acts permitted agreements to be signed whereby the Government of Canada would construct or reconstruct the protective works and would assume the responsibility of maintaining these works until they were turned over to the Provinces. The Federal Government is responsible also for any engineering work in connection with the complete program. The Provinces are responsible for the organization of the marsh areas, the freshwater drainage and acquisition of any land required and for the initiation and follow-up of a suitable land-use program. Because of the small area of marshland in Prince Edward Island no provincial legislation was considered necessary in that Province.

By Mar. 31, 1956, the Provinces had asked to have 151 areas considered for reclamation purposes. These comprised 35,565 acres in New Brunswick, 46,251 acres in Nova Scotia and 275 acres in Prince Edward Island. This total of 82,091 acres constitutes an integral part of the estimated 490,000 acres of farm land in the three provinces.

Investigations to determine the advisability of constructing a large structure to eliminate the need for many miles of dyke and many aboiteaux are being carried out on the Annapolis River in Nova Scotia and on the Tantramar and Shepody Rivers in New Brunswick. Construction on the Shepody River project was started in 1953 and all major works were completed in 1956.

Subsection 2.—Provincial Projects

Saskatchewan.*—The Conservation and Development Branch, established in 1949, was made responsible for: administration of water rights; irrigation development, engineering and structures; flood control and drainage; restoration of abandoned, under-utilized and misused lands; and construction of provincial community pastures outside the area covered by the agreement with PFRA and not provided for in the agreement with the Federal Government.

The Provincial Department of Agriculture's conservation and development activity in the field of agricultural rehabilitation and reclamation is based on co-operation with the Federal Government's PFRA program with which a close working arrangement is maintained. Following is a summary of the activities of the Saskatchewan Department of Agriculture as at Dec. 31, 1956.

Water Rights.—Under the Water Rights Act, 5,719 water storage projects for domestic irrigation, municipal and industrial purposes covering 460,702 acre-feet of water have been licensed, and there are 111 gauging stations being maintained to complete hydro-

* Prepared by W. H. Horner, Deputy Minister, Saskatchewan Department of Agriculture.

metric surveys and a surface water inventory. The Water Rights Office represents the Province of Saskatchewan on the engineering committee of the International Joint Commission and on the Prairie Provinces Water Board.

Irrigation Development.—By the end of 1956, 114,010 acres of topographic surveys and 148 miles of strip topographic surveys were completed on irrigation projects; 295 miles of ditch were built and 143 miles maintained; 1,383 structures were installed and 27 maintained; and 4,993 acres were levelled.

Drainage Development.—Topographic surveys covered 136,804 acres and 5,240 miles of strip topographic surveys were completed on drainage projects; 832 miles of ditch and 245 miles of road were built and 148 miles of ditch maintained; 12 miles of dyke were built and 793 structures installed in drainage systems.

Development of Under-utilized and Misused Lands.—A total of 48,387 acres of tame perennial forage crops were seeded, mostly for fodder production; and 671 miles of fence were built or rebuilt in the establishment of departmental, municipal or co-operative pastures.

Miscellaneous Project Work.—Such projects included: regrassing about 17,564 acres; planting 580,700 trees; constructing 112 dams and dugouts (with the co-operation of groups of farmers in the area of northern Saskatchewan outside the boundaries of the PFRA program); and organizing 91 conservation areas covering 11,387,904 acres, in order to help local farmers install and maintain drainage and other conservation works.

Pasture Development.—Through the Lands Branch of the Provincial Department of Agriculture the Province has transferred title to 1,194,415 acres and leased without charge another 311,437 acres of grazing land to PFRA for the development of community pastures. Outside the PFRA program, the Province developed an improved 775,836 acres, making a total of 2,281,688 acres available as community pasture land. The 103 pastures outside the PFRA program are operated by co-operative associations, by municipalities or by the Provincial Department of Agriculture; those operated by the Province provided grazing in 1956 for 16,436 cattle owned by 866 local farmers.

Development of Land for Cultivation.—Crown lands, either under cultivation or suitable for cultivation, are leased for a 33-year period. The Province may either reimburse farmers in cash for the cost of clearing and breaking virgin land or the farmers may retain crop shares equivalent in value to costs sustained. To Mar. 31, 1957, the investment of the Province, recorded by the Lands Branch of the Provincial Department of Agriculture, for land clearing and breaking amounted to \$5,739,292, and included work done in six settlement projects involving about 240 farm units where 50 acres were cleared and broken before the land was leased.

Alberta.*—The Alberta Water Resources Act gives the Minister of the Department of Agriculture wide powers to investigate the water resources of the Province and extensive surveys have been carried out to determine the distribution and extent of the available water supplied in the Province and the most beneficial use for irrigation, water power and other purposes. The Water Resources Branch of the Provincial Department of Agriculture administers the licensing of water power projects and the construction work in several irrigation projects. Irrigation projects are also licensed and water allocated for domestic and irrigation purposes. Other work includes administration of drainage districts, co-operation on the Peace River Dug-out Project and on river protection projects where flooding occurs. In more recent years much of this work has been carried out by the Federal Government in co-operation with the Provincial Government.

Stream measurement is being done by the Hydrometric Service of the Federal Department of Northern Affairs and National Resources and irrigation surveys are carried out largely by the water development organization under the PFRA (see p. 413).

* Prepared by R. M. Putnam, Deputy Minister, Alberta Department of Agriculture.

The Calgary Power Company has completed a fairly detailed water power survey of the Bow River and its tributaries and, as a result has constructed a number of water power reservoirs and power stations on the stream. Also, in co-operation with the Provincial Government, the Company has made a preliminary survey of Lesser Slave River and the Athabasca River from Athabasca to McMurray. The study of the North Saskatchewan basin is continuing more particularly in its main tributary, the Brazeau, where foundation, topographic and hydrometric information is being gathered. This study will cover measures to increase power supply and augment low winter flow.

By Order in Council, Feb. 17, 1941, the St. Mary and Milk Rivers Water Development Committee was set up to investigate and report on the many phases of irrigation development of southern Alberta, including water supplies available to Canada from the Waterton, Belly, St. Mary and Milk Rivers; the most feasible plan to put these waters to the most beneficial use; the benefits that such water development projects would confer on federal and provincial interests; the allocation of costs; and methods that might be adopted to finance such developments. The Committee completed a thorough investigation and published a comprehensive report on the projects on the international streams, and also on other projects in the Province.

The allocation of water to the major irrigation projects in Alberta, as approved by the Prairie Provinces Water Board, is as follows:—

<i>Project</i>	<i>Acres Irrigable</i>	<i>Water Allocation in Acre-feet</i>
St. Mary-Milk Rivers Development.....	465,000	796,000
Western Irrigation District.....	50,000	85,700
Eastern Irrigation District.....	281,000	562,000
Bow River Irrigation Development.....	240,000	478,534
United Irrigation District.....	34,000	51,000
Lethbridge Northern District.....	96,135	150,000
Mountain View Irrigation District.....	3,600	6,000
Aetna Irrigation District.....	7,300	13,000
Leavitt Irrigation District.....	4,400	7,000
Macleod Irrigation District.....	5,000	8,000
Private Projects.....	70,000	80,000
TOTALS.....	1,256,435	2,237,234

Developments during 1955-57 are outlined as follows:—

Irrigation.—Operation problems in the irrigated areas were under special study, particularly alkali and seepage.

St. Mary-Milk Rivers Development.—The low line canal was completed. A canal and diversion works from Waterton-Belly to the St. Mary dam was under construction by PFRA, and special soil studies were being made of the area under the high line canal.

Bow River Development Project (Western Block).—The construction phase of this project was started late in 1953. The irrigable area is approximately 60,000 acres and 17,000 acres were ready for operation. This development is the responsibility of the Province of Alberta.

Heart River Project.—Water became available to the towns of McLennan, Falher and Girouxville through this project.

River Protection and Stream Control.—Work proceeded on the Milk, Crowsnest and Bow Rivers.

High Prairie-Enilda Flooding.—Surveys were made to ascertain the possibility of controlling the East and West Prairie Rivers in the High Prairie-Enilda delta on the west end of Lesser Slave Lake.

Pembina River Flooding Problem.—Surveys were made to determine the feasibility of constructing cutoffs in the Pembina River channel to speed the water out of the Manola-Jarvie flood areas.

Erosion.—The soil erosion problems in some areas have long been of considerable concern, with the immediate problem located in the Kleskun Hills near Grande Prairie. Remedial work under way consists of the construction of a system of flumes and drop structures to control gullying.

Industrial Water.—This phase of water development is becoming increasingly important to the progress of the Province. During 1956-57 several large industrial plants received water licences.

British Columbia.*—About 20 p.c. of the arable land in British Columbia is under cultivation and nearly all the grazing area is being utilized. The estimated 1,300,000 acres developed give a ratio of approximately one acre per person. Within this arable area there exists an estimated 210,000 acres of irrigated land, and the total acreage of irrigable land in British Columbia is estimated at 400,000 acres.

About three-quarters of the irrigated area is made up of individual projects and the other quarter is served by the larger irrigation projects listed in Table 5.

* Prepared by the Comptroller of Water Rights, British Columbia Department of Lands and Forests.

5.—Major Irrigation Projects in British Columbia, April 1957

Project	Water Supply	Irrigable Area	Irrigated Area	Charge on Grade "A" Land per Acre	Locality
		acres	acres	\$	
Provincial Irrigation System—					
Southern Okanagan Lands Project.....	Okanagan River.....	5,000	4,200	12.50	Okanagan Valley
Municipal Irrigation Systems—					
Penticton Municipality....	Penticton and Ellis Creeks..	2,100	2,050	20.00	"
Summerland Municipality..	Trout and Eneas Creeks....	3,436	3,365	(av.) 13.39	"
Irrigation Districts—					
Balfour.....	Laird Creek.....	240	150	—	Kootenay Valley
Bankhead.....	Kelowna and Mission Creeks	85	85	22.05	Okanagan Valley
Barriere.....	Barriere River.....	182	92	5.00	North Thompson Valley
B.C. Fruitlands.....	Jameson and North Thompson River.....	3,735	2,062	15.75	"
Black Mountain.....	Mission Creek, etc.....	4,297	3,764	15.00	Okanagan Valley
Black Sage.....	Okanagan River.....	—	169	16.00	"
Blueberry Creek.....	Blueberry Creek.....	133	66	15.00	Columbia Valley
Boundary Line.....	Osoyoos Lake.....	95	95	11.70	Okanagan Valley
Brent Davis.....	Mission Creek.....	490	415	6.00	"
Cawston.....	Similkameen River.....	650	500	—	"
Chase.....	Chase Creek.....	639	625	2.50	South Thompson Valley
Covert.....	4th of July Creek.....	280	280	5.00	Near Grand Forks
Darfield.....	Lindquist Creek.....	363	200	—	North Thompson Valley
East Creston.....	Arrow Creek.....	1,550	1,367	5.00	Kootenay Valley
East Osoyoos.....	Osoyoos Lake.....	329	188	25.00	Okanagan Valley
Fillison.....	Kelowna Creek.....	662	—	8.30	"
Erickson.....	Sullivan Creek.....	—	110	5.00	Kootenay Valley
Fairview Heights.....	Similkameen River.....	631	611	24.25	Near Princeton
Glenmore.....	Kelowna Creek.....	1,926	1,926	13.00	Okanagan Valley
Grand Forks.....	Kettle River.....	2,600	2,400	6.25	Kettle Valley
Hefley.....	North Thompson River.....	1,648	1,648	3.14	North Thompson Valley
Kaleden.....	Marron River and Shatford Creek.....	548	539	22.85	Okanagan Valley
Keremeos.....	Ashnola River, etc.....	1,120	985	12.60	Similkameen Valley
Lakeview.....	Lambly (Bear) Creek.....	1,057	952	11.00	Okanagan Valley
Malcolm Horie.....	Joseph Creek.....	220	150	3.00	Near Cranbrook
Merritt Central.....	Coldwater River.....	125	100	—	Nicola Valley
Naramata.....	Lequime, Naramata and Robinson Creeks.....	981	981	19.51	Okanagan Valley
Okanagan Mission.....	Bellevue Creek and Okanagan Lake.....	446	362	17.00	"

5.—Major Irrigation Projects in British Columbia, April 1957—concluded

Project	Water Supply	Irrigable Area	Irrigated Area	Charge on Grade "A" Land per Acre	Locality
		acres	acres	\$	
Irrigation Districts—concl.					
Osoyoos.....	Haynes Creek, etc.....	203	203	25.00	Okanagan Valley
Oyama.....	Long Lake.....	362	342	22.00	"
Peachland.....	Peachland Creek.....	550	442	13.00	"
Renata.....	Dog Creek.....	149	120	12.00	Columbia Valley
Robson.....	Pass Creek.....	263	250	6.00	"
Scotty Creek.....	Scotty Creek.....	844	844	4.50	Okanagan Valley
South East Kelowna.....	Hydraulic Creek.....	2,975	2,975	12.90	"
South Vernon.....	Vernon Creek.....	319	207	5.00	"
Todd Hill.....	South Thompson River.....	140	113	12.00	South Thompson Valley
Trout Creek.....	Trout Creek.....	318	273	4.00	Okanagan Valley
Valley view.....	South Thompson River.....	150	128	3.00	South Thompson Valley
Vermilion.....	Kindersley Creek.....	1,483	1,483	6.25	Columbia Valley
Vernon.....	Coldstream, Paradise Creeks, etc.....	8,035	8,035	10.00	Okanagan Valley
Vinsulla.....	Knouff Creek, etc.....	298	155	3.00	"
Westbank.....	Powers Creek.....	832	803	15.30	"
West Bench.....	Okanagan River.....	164	150	—	"
Wilmer Waterworks District.....	Wilmer Creek.....	241	109	5.00	Kootenay Valley
Winfield and Okanagan Centre I.D.....	Vernon Creek.....	1,898	1,875	16.00	Okanagan Valley
Wynndel Irrigation District.....	Duck Creek.....	516	490	3.60	Kootenay Valley
Irrigation Companies—					
Wood Lake Water Company.....	Oyama Creek.....	832	832	7.50	Okanagan Valley

Section 4.—Statistics of Agriculture*

The collection, compilation and publication of statistics relating to agriculture is a responsibility of the Dominion Bureau of Statistics. Valuable information obtained through the Censuses of Canada and partial-coverage surveys may be obtained in reports issued by the Bureau.†

The Bureau also collects and publishes primary and secondary statistics of agriculture on an annual and monthly basis. The primary statistics relate mainly to the reporting of crop conditions, crop and livestock estimates, values of farm lands, wages of farm labour and prices received by farmers for their products. The secondary statistics relate to the marketing of grain and livestock, dairying, milling and sugar industries and cold storage holdings.

In the collection of annual and monthly statistics the Federal Department of Agriculture and the Provincial Departments of Agriculture, as well as such agencies as the Board of Grain Commissioners and the Canadian Wheat Board, co-operate with the Bureau. Also, many thousands of farmers throughout Canada send in reports voluntarily.

The figures (except for 1956 Census data) contained in this Section do not include estimates for Newfoundland. Agriculture plays a relatively minor part in Newfoundland's economy, commercial production of most agricultural products being quite small.

Subsection 1.—Cash Income from the Sale of Farm Products 1956

Preliminary estimates indicate that, during 1956, Canadian farmers (excluding Newfoundland) realized \$2,662,100,000 from the sale of farm products. This estimate, which includes participation payments on previous years' grain crops, is about 13 p.c. above the \$2,357,100,000 for 1955, but is still below the all-time high of \$2,849,300,000

* Revised in the Agriculture Division, Dominion Bureau of Statistics.

† Copies obtainable from the Dominion Statistician or the Queen's Printer, Ottawa.

established in 1952. Cash income for 1956 was up in all provinces, the increases varying from less than 1 p.c. in Ontario to about 40 p.c. in Saskatchewan. Higher returns from the sale of grains, cattle, hogs, poultry and eggs, together with larger grain participation payments, contributed largely to the increase. Supplementary payments made under the provisions of the Prairie Farm Assistance Act to farmers in Western Canada amounted to about \$5,000,000 in 1956 as against \$33,300,000 in 1955.

Field Crops.—Greatly increased marketings and higher average prices brought cash income from the sale of wheat during 1956 up to approximately \$460,000,000, about 40 p.c. above the \$329,500,000 realized in 1955. This increase of about \$130,000,000 in cash returns represents the largest contribution of any single commodity to the gain in total cash income. Wheat participation payments, totalling nearly \$62,000,000 in 1956, were well above the \$26,000,000 distributed a year earlier. Marketings of oats and barley were also up substantially from the level of 1955 resulting in a cash income of about \$150,000,000 as against nearly \$98,000,000. On the other hand, participation payments on these two grains in 1956 were only slightly above the 1955 level. Estimated income from the sale of flaxseed reached an all-time record in 1956 at close to \$62,000,000. The advance of 52.6 p.c. over the 1955 estimate of \$40,500,000 resulted from both increased marketings and higher prices. Higher returns from the sale of potatoes were also the result of a combination of larger marketings and somewhat higher average prices, but smaller marketings reduced the income from corn.

Livestock and Poultry.—Cash income from the sale of livestock in 1956 was estimated at \$736,600,000 as compared with \$702,900,000 for 1955. The gain was almost entirely contributed by higher returns from the sale of cattle and hogs. Higher marketings of cattle more than offset slightly lower prices and an increase in both marketings and prices provided an income from hogs of approximately \$302,000,000, an increase of 4.3 p.c. over the estimate of \$289,600,000 for 1955. The 1956 returns from calves were only slightly above the 1955 level. Income from the sale of poultry meat reached a new high in 1956 at \$161,200,000, approximately 7 p.c. above the returns of \$150,500,000 for 1955.

Dairy Products.—Cash income from the sale of dairy products rose from \$438,400,000 in 1955 to an all-time high of \$445,900,000 in 1956. Somewhat larger quantities of these products were marketed at slightly higher prices.

Eggs.—Farm cash returns from the sale of eggs at \$143,800,000 in 1956 were 8.5 p.c. above the \$132,600,000 realized in 1955. Almost all of the increase was the result of higher marketings since average prices were only fractionally above the level of the previous year.

6.—Cash Income from the Sale of Farm Products by Source 1954-56

(Exclusive of Newfoundland)

NOTE.—Figures for 1926-48 will be found in DBS *Reference Paper No. 25* (Part II). Figures for 1949 are given in the 1952-53 Year Book, p. 407; for 1950 and 1951 in the 1954 edition, p. 402; and for 1952 and 1953 in the 1956 edition, p. 419.

Item	1954 ^r	1955	1956
	\$'000	\$'000	\$'000
Grains, Seeds and Hay	630,748	548,593	796,902
Wheat.....	321,341	329,549	460,291
Wheat participation payments.....	97,393	25,717	61,987
Oats.....	51,412	27,801	50,876
Oats participation payments.....	5,631	7,021	8,170
Barley.....	85,569	69,748	99,236
Barley participation payments.....	9,834	14,438	15,217
Rye.....	11,788	6,545	14,320
Flax.....	19,691	40,544	61,875
Corn.....	13,513	17,043	14,790
Clover and grass seed.....	12,774	8,955	8,660
Hay and clover.....	1,802	1,232	1,480

6.—Cash Income from the Sale of Farm Products by Source 1954-56—concluded

Item	1954 [*]	1955	1956
	\$'000	\$'000	\$'000
Vegetables and Other Field Crops	165,363	182,433	179,201
Potatoes.....	29,942	35,152	41,275
Vegetables.....	56,560	58,619	61,671
Sugar beets.....	11,973	12,875	12,397
Tobacco.....	66,888	75,837	63,858
Livestock and Poultry	840,636	853,433	897,829
Cattle and calves.....	372,848	403,294	424,688
Sheep and lambs.....	9,690	10,084	9,791
Hogs.....	321,641	289,563	302,149
Poultry.....	136,457	150,492	161,201
Dairy Products	426,538	438,392	415,913
Fruits	48,205	40,801	34,705
Other Principal Farm Products	138,441	146,218	157,115
Eggs.....	125,342	132,581	143,805
Wool.....	2,178	2,041	2,171
Honey.....	3,442	4,215	4,413
Maple products.....	7,479	7,381	6,726
Miscellaneous Farm Products	44,839	44,312	49,293
Forest Products Sold Off Farms	83,336	86,141	87,973
Fur Farming	14,304	16,760	13,215
Totals, Cash Income from Farm Products	2,392,410	2,357,133	2,662,146
Supplementary payments ¹	2,427	33,338	5,004
Totals, Cash Income	2,394,837	2,390,471	2,667,150

¹ Includes payments made under the Prairie Farm Assistance Act; other government subsidies have been included in cash income from individual commodities.

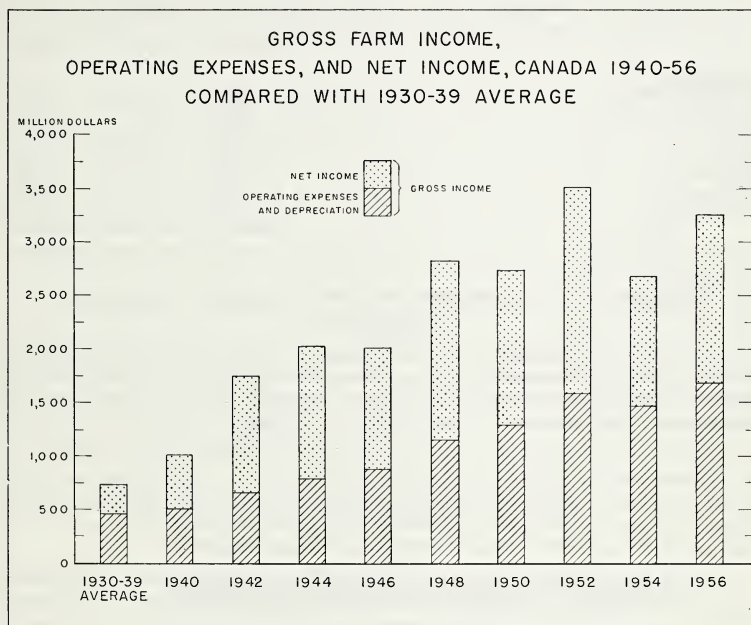
7.—Cash Income from the Sale of Farm Products by Province 1954-56

NOTE.—Figures for 1926-45 will be found in DBS *Reference Paper No. 25* (Part II). Figures for 1946-49 are given in the 1952-53 Year Book, p. 408; for 1950 and 1951 in the 1954 edition, p. 403; and for 1952 and 1953 in the 1956 edition, p. 420.

Province	1954 [*]	1955	1956
	\$'000	\$'000	\$'000
Newfoundland.....	24,374	25,931	26,428
Prince Edward Island.....	44,296	42,745	44,410
Nova Scotia.....	48,835	47,797	51,370
New Brunswick.....	406,960	424,193	440,967
Quebec.....	714,375	749,104	749,293
Ontario.....	187,890	173,542	209,209
Manitoba.....	472,424	424,650	597,622
Saskatchewan.....	386,245	365,130	432,963
Alberta.....	107,011	104,041	109,884
British Columbia.....			
Totals	2,392,410	2,357,133	2,662,146

Net Income of Farm Operators from Farming Operations 1956.—Net income of Canadian farmers from farming operations (excluding Newfoundland) estimated at \$1,573,000,000 in 1956, continued upward from the postwar low of \$1,161,000,000 established in 1954. The current estimate is 10.5 p.c. above the \$1,423,200,000 for 1955 and also above the average for the postwar years (1946-55) of \$1,547,400,000. The all-time high net farm income estimate was recorded in 1951 and amounted to \$2,154,500,000.

Gains in cash income and value of income in kind were offset to some extent by higher farm operating expenses and depreciation charges and a lower total value of inventory changes. All provinces except Nova Scotia, Ontario and British Columbia recorded increases in 1956 over 1955.



8.—Net Income of Farm Operators from Farming Operations 1951-56

(Exclusive of Newfoundland)

Item	1954 ¹	1955	1956
	\$'000	\$'000	\$'000
1. Cash income from sale of farm products.....	2,392,410	2,357,133	2,662,146
2. Income in kind.....	393,194	403,306	411,551
3. Value of changes in inventory.....	-115,409	210,820	169,747
4. Gross income (Items 1+2+3).....	2,670,195	2,971,259	3,243,444
5. Operating expenses.....	1,265,945	1,332,461	1,422,840
6. Depreciation charges.....	245,692	248,930	252,575
7. Total operating and depreciation (Items 5+6).....	1,511,637	1,581,391	1,675,415
8. Net income, excluding supplementary payments (Items 4-7).....	1,158,558	1,389,868	1,568,029
9. Supplementary payments.....	2,427	33,338	5,004
Net Income of Farm Operators from Farming Operations (Items 8 + 9)¹.....	1,160,985	1,423,206	1,573,033

¹ Includes estimated rental value of farm homes and supplementary payments made under the provisions of the Prairie Farm Assistance Act.

9.—Net Income of Farm Operators from Farming Operations by Province 1954-56

NOTE.—Net income includes estimated rental value of farm homes and supplementary payments made under the provisions of the Prairie Farm Assistance Act.

Province	1954 ^a	1955	1956
	\$'000	\$'000	\$'000
Newfoundland.....			
Prince Edward Island.....	13,058	13,931	14,936
Nova Scotia.....	20,697	17,907	17,765
New Brunswick.....	29,990	26,854	30,313
Quebec.....	268,747	281,989	285,568
Ontario.....	387,350	422,072	405,561
Manitoba.....	73,669	97,149	132,457
Saskatchewan.....	158,708	315,772	390,742
Alberta.....	192,695	215,375	266,812
British Columbia.....	36,071	32,157	28,879
Totals.....	1,160,985	1,423,206	1,573,033

Subsection 2.—Index Numbers of Physical Volume of Agricultural Production

A preliminary estimate places the index of physical volume of agricultural production for 1956 at 165.3 (1935-39=100), 10.3 p.c. above the estimate of 149.9 for 1955. The current estimate is only fractionally below the all-time high of 166.0 established in 1952 and replaces the previous second-place estimate of 164.2 recorded in 1942.

The increase in total agricultural production in 1956 over 1955 is largely attributable to the larger grain crops harvested in the Prairie Provinces. Contributing also to the increase were larger outputs of livestock, dairy products, poultry, eggs, sugar beets, tobacco and maple products; the gains in production of livestock and dairy products were very small and there were lower outturns of potatoes, fruits and vegetables.

Increased agricultural production was recorded for all provinces except the Maritimes and British Columbia. On a percentage basis the provincial gains ranged from slightly over 2 p.c. in Quebec and Ontario to nearly 33 p.c. in Saskatchewan. Reductions in output varied from nearly 5 p.c. in British Columbia to more than 6 p.c. in the Maritimes.

10.—Index Numbers of Physical Volume of Agricultural Production by Province 1947-56

(1935-39=100. Exclusive of Newfoundland)

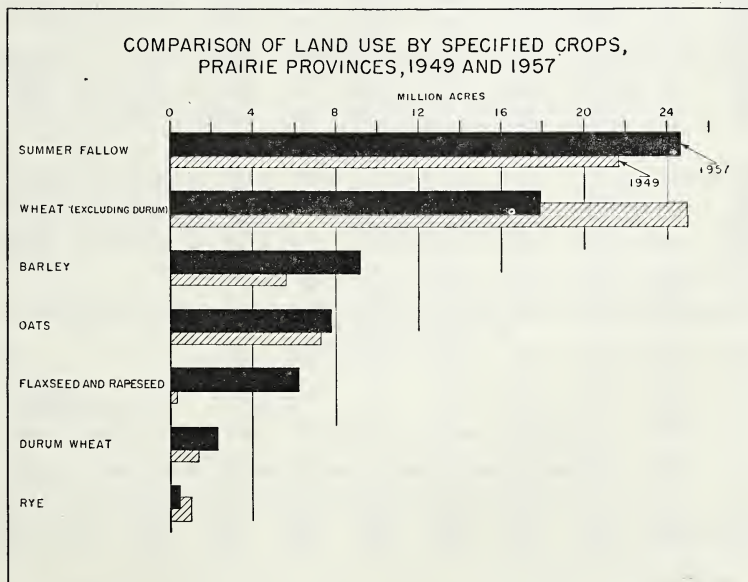
NOTE.—For a description of this index, methods and coverage, see *DBS Quarterly Bulletin of Agricultural Statistics* for April-June, 1952. Figures for 1935-44 are given in the 1950 Year Book, p. 420, and for 1945 and 1946 in the 1956 edition, p. 423.

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1947.....	128.9	86.7	119.0	102.6	107.7	122.1	128.2	115.8	146.4	116.0
1948.....	133.3	91.8	124.3	121.6	119.0	143.8	131.8	118.5	143.7	125.1
1949.....	158.8	105.1	145.8	126.4	124.9	125.7	128.1	98.1	148.7	122.3
1950.....	148.2	105.2	140.2	136.3	128.1	137.8	168.3	121.8	134.2	137.8
1951.....	119.5	87.7	110.4	139.0	128.6	146.4	218.1	157.1	126.9	154.7
1952.....	142.3	80.6	109.4	124.7	119.6	162.5	267.4	174.8	133.3	166.0
1953.....	142.8	80.6	121.6	132.9	129.5	132.1	230.2	157.5	137.6	156.2
1954 ^a	150.3	88.7	114.1	129.8	128.6	102.1	101.5	116.0	131.4	117.3
1955.....	150.0	93.3	135.9	143.8	128.6	127.3	206.7	144.7	131.2	149.9
1956.....	140.2	87.1	127.1	147.0	132.0	169.1	238.0	166.7	125.2	165.3

Subsection 3.—Field Crops

Following a sharp reduction in crop output in 1954 when rust took a heavy toll, Canadian farmers experienced two very satisfactory seasons in 1955 and 1956 from the production point of view. Despite a somewhat late seeding season in many parts of Canada, weather conditions during the summer and autumn of 1955 were generally favourable to good growth and development of crops. Average yields per acre for the 21 crops for which estimates are made either equalled or exceeded those of 1954 except for buckwheat, dry peas, rapeseed and field roots. New production records were set in corn for grain, soybeans and mustard seed. In 1956 the seeding season was again delayed in many parts of Canada but, as in the previous year, weather conditions during the summer and autumn were generally favourable and yields of most crops were well above average. Early autumn frosts and excessive rains in the Prairie Provinces lowered the quality of the wheat crop somewhat and in Eastern Canada excessive rains during the haying season caused harvesting difficulties. Average yields per acre for the 21 crops for which estimates are made exceeded those of 1955 except for winter wheat, fall and spring rye, corn for grain, soybeans, sunflower seed, hay, fodder corn and sugar beets. New production records were set in 1956 for flaxseed, rapeseed, mustard seed and mixed grains.

Marketings of the five major grains (wheat, oats, barley, rye and flaxseed) totalled 567,029,000 bu. in 1955-56 and 584,911,000 bu. in the 1956-57 crop year. These amounts were well below the record 1952-53 year when marketings reached 844,900,000 bu. but compared favourably with the ten-year (1947-48-1956-57) average of 577,957,000 bu. Combined exports of the same grains (including wheat flour, rye flour, rolled oats and oatmeal, malt, and pot and pearl barley) amounted to 406,528,000 bu. in 1955-56 and 390,003,000 bu. in 1956-57. Exports during the period were somewhat above the ten-year average of 381,753,000 bu. However, exports and domestic disappearance during the period did not increase in proportion to the increase in crop production and as a result stocks of grain in Canada continued to build up.



The gross value of production of principal field crops on Canadian farms in 1955, based on average prices received by farmers throughout the 1955-56 crop year, was estimated at \$1,807,114,000. On the same basis, in 1956 the value had decreased slightly to \$1,757,332,000. These amounts were well below those established in the record-breaking year of 1952 when the total reached \$2,306,397,000 and the 1951 total of \$2,120,301,000, but compared quite favourably with other postwar years. Estimates of the value of 1957 crops, based on average prices received by farmers during the crop year ending July 31, 1958, will be published in one of the regularly scheduled DBS crop reports and in the *Quarterly Bulletin of Agricultural Statistics*.

**11.—Acreages, Yields and Prices of Principal Field Crops 1952-56 and
Five-Year Average 1945-49**
(Exclusive of Newfoundland)

Crop and Year	Area	Yield per Acre	Pro-duction	Average Price	Total Value ¹	Crop and Year	Area	Yield per Acre	Pro-duction	Average Price	Total Value ¹
	'000 acres	bu.	'000 bu.	\$ per bu.	\$'000		'000 acres	bu.	'000 bu.	\$ per bu.	\$'000
Wheat—						Mixed Grains—					
Av. 1945-49...	24,558	14.8	362,774 ^r	1.62	587,412 ^r	Av. 1945-49...	1,226	35.9	44,046	0.84	36,988
1952 ^r	26,164	26.8	701,944 ^r	1.59	1,112,812	1952.....	1,570	40.3	63,217	0.97	61,015
1953 ^r	26,384	24.0	634,007	1.33	844,447	1953.....	1,445	43.0	62,188	0.84	52,409
1954 ^r	25,540	13.0	331,961	1.24	411,743	1954.....	1,633	37.6	61,454	0.83	51,078
1955.....	22,660	22.9	519,188	1.37	709,475	1955.....	1,705	38.7	65,990	0.84	55,172
1956.....	22,781	25.2	573,062	1.07	614,818	1956.....	1,560	42.7	66,608	0.84	56,001
Oats—						Flaxseed—					
Av. 1945-49...	11,513	28.4	326,437	0.67	219,370	Av. 1945-49...	1,164	8.2	9,502	3.91	37,188
1952.....	11,062	42.2	466,793	0.66	309,467	1952.....	1,130	10.9	12,261	3.16	38,749
1953.....	9,830	41.4	406,951	0.62	253,904	1953.....	972	10.2	9,912	2.44	24,213
1954.....	10,161	30.2	306,793	0.67	206,432	1954.....	1,206	9.3	11,238	2.54	28,561
1955.....	11,178	36.5	407,783	0.67	272,218	1955.....	1,838	10.7	19,748	2.77	54,773
1956.....	11,707	44.8	524,445	0.57	300,189	1956.....	3,041	11.3	34,463	2.56	88,277
Barley—						Potatoes—					
Av. 1945-49...	6,569	21.5	141,171	0.95	133,431	Av. 1945-49...	417	159.0	66,173	1.10	72,522
1952.....	8,477	34.4	291,389	1.06	307,763	1952.....	297	202.4	60,071	1.68	100,784
1953.....	8,911	29.4	262,065	0.86	224,580	1953.....	323	209.1	67,545	0.78	52,977
1954.....	7,856	22.3	175,509	0.89	155,577	1954.....	300	172.8	51,783	1.45	75,028
1955.....	9,932	25.4	252,385	0.87	220,521	1955.....	308	214.5	66,127	1.06	70,024
1956.....	8,390	32.1	269,065	0.73	195,551	1956.....	312	230.6	68,932	1.13	77,914
Rye—						Tame Hay—		ton	'000 tons	\$ per ton	
Av. 1945-49...	1,192	11.1	13,182	1.85	24,362	Av. 1945-49...	10,535	1.59	16,729	14.99	250,847
1952.....	1,274	19.5	24,833	1.38	34,267	1952.....	10,679	1.79	19,083	14.24	271,687
1953.....	1,494	19.3	28,775	0.82	23,484	1953.....	10,702	1.84	19,650	13.71	269,489
1954.....	850	16.7	14,176	0.91	12,908	1954.....	10,802	1.81	19,549	13.99	273,436
1955.....	780	18.9	14,753	0.92	13,506	1955.....	11,055	1.86	20,614	15.03	309,793
1956.....	547	15.7	8,584	1.00	8,560	1956.....	10,922	1.80	19,655	15.40	302,698

¹ Gross value of farm production; does not represent cash income from sales.

**12.—Acreages, Production and Values of Principal Field Crops by Province 1955 and 1956
and Five-Year Average 1945-49**
(Exclusive of Newfoundland)

Province	Area			Total Production			Gross Farm Value ¹	
	Average 1945-49 ^r	1955	1956	Average 1945-49 ^r	1955	1956	Average 1945-49 ^r	1956
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	\$'000	\$'000
Wheat	21,558	22,660	22,781	362,774	519,188	573,062	587,412	614,818
Prince Edward Island...	2	4	3	54	87	81	84	142
Nova Scotia.....	1	1	1	23	24	20	34	35
New Brunswick.....	2	2	2	46	40	61	77	102
Quebec.....	12	14	15	206	283	365	313	606

For footnote, see end of table, p. 429.

12.—Acreages, Production and Values of Principal Field Crops by Province 1955 and 1956 and Five-Year Average 1945-49—continued

Province	Area			Total Production			Gross Farm Value ¹	
	Average 1945-49 ²	1955	1956	Average 1945-49 ²	1955	1956	Average 1945-49 ²	1956
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	\$'000	\$'000
Wheat—concl.								
Ontario								
(a) Winter wheat.....	621	582	625	18,100	19,963	20,000	28,358	28,800
(b) spring wheat.....	40	27	17	810	537	357	1,287	550
Manitoba.....	2,420	2,075	2,199	48,000	42,000	56,000	79,827	62,720
Saskatchewan.....	14,438	14,100	14,569	185,000	320,000	355,000	301,085	376,300
Alberta.....	6,915	5,789	5,296	108,000	135,000	140,000	171,983	144,200
British Columbia.....	106	66	54	2,615	1,254	1,175	4,365	1,363
Oats.....	11,513	11,178	11,707	326,437	407,783	524,445	219,370	300,189
Prince Edward Island...	110	95	98	4,073	3,325	4,508	3,113	3,426
Nova Scotia.....	64	51	43	2,221	2,040	2,035	1,891	1,994
New Brunswick.....	178	137	130	6,136	4,110	6,500	4,799	5,200
Quebec.....	1,377	1,316	1,258	32,961	36,848	46,294	26,716	40,739
Ontario.....	1,503	1,708	1,427	56,770	67,808	60,648	42,078	47,305
Manitoba.....	1,460	1,485	2,053	49,000	50,000	92,000	31,402	47,840
Saskatchewan.....	4,084	3,654	3,670	95,000	135,000	165,000	60,134	80,850
Alberta.....	2,645	2,649	2,935	75,000	105,000	143,000	46,148	70,070
British Columbia.....	93	83	92	4,535	3,652	4,460	3,088	2,765
Barley.....	6,569	9,932	8,390	141,171	252,385	269,065	133,431	195,551
Prince Edward Island...	6	3	1	169	72	32	172	34
Nova Scotia.....	6	2	2	153	71	56	172	66
New Brunswick.....	11	7	4	312	127	156	346	165
Quebec.....	84	62	32	1,869	1,515	961	2,006	1,086
Ontario.....	234	144	105	7,477	4,752	3,713	7,148	3,936
Manitoba.....	1,766	2,090	1,548	42,000	40,000	42,000	40,907	32,760
Saskatchewan.....	2,354	3,846	3,027	43,000	104,000	99,000	39,813	71,280
Alberta.....	2,088	3,702	3,606	45,000	100,000	121,000	42,121	84,700
British Columbia.....	21	77	66	731	1,848	2,147	746	1,524
Fall Rye.....	863	569	368	9,882	11,343	5,834	18,272	5,987
Quebec.....	4	5	8	59	84	181	77	223
Ontario.....	86	65	86	1,771	1,255	1,865	2,900	2,201
Manitoba.....	40	79	61	671	1,640	1,000	1,140	970
Saskatchewan.....	531	284	157	4,323	5,500	1,950	8,394	1,833
Alberta.....	201	133	55	3,029	2,800	800	5,710	728
British Columbia.....	2	3	2	29	64	38	50	32
Spring Rye.....	329	211	179	3,299	3,410	2,750	6,090	2,573
Manitoba.....	10	4	7	142	60	100	255	97
Saskatchewan.....	192	166	143	1,917	2,700	2,150	3,522	2,021
Alberta.....	127	41	29	1,240	650	500	2,314	455
All Rye.....	1,192	780	547	13,182	14,753	8,584	24,362	8,560
Quebec.....	4	5	8	59	84	181	77	223
Ontario.....	86	65	86	1,771	1,255	1,865	2,900	2,201
Manitoba.....	50	83	68	813	1,700	1,100	1,395	1,067
Saskatchewan.....	723	450	300	6,240	8,200	4,100	11,916	3,854
Alberta.....	328	174	84	4,269	3,450	1,300	8,024	1,183
British Columbia.....	2	3	2	29	64	38	50	32
Peas.....	83	49	88	1,375	748	1,817	3,811	3,618
Quebec.....	7	3	3	91	52	56	339	224
Ontario.....	26	7	8	468	108	127	1,337	318
Manitoba.....	21	20	56	366	200	1,168	916	1,752
Saskatchewan.....	7	1	3	109	20	72	294	162
Alberta.....	16	10	12	215	242	252	598	693
British Columbia.....	6	7	7	126	126	142	326	469
Beans.....	82	81	66	1,356	1,286	1,146	5,024	4,383
Quebec.....	2	1	2	30	14	25	124	112
Ontario.....	80	80	64	1,326	1,272	1,121	4,900	4,271
Soybeans.....	73	214	243	1,492	5,650	5,301	3,492	11,376
Ontario.....	73	214	240	1,492	5,650	5,269	3,492	11,328
Manitoba.....	—	—	3	—	—	32	—	48

For footnote, see end of table, p. 429.

12.—Acreages, Production and Values of Principal Field Crops by Province 1955 and 1956 and Five-Year Average 1945-49—continued

Province	Area			Total Production			Gross Farm Value ¹	
	Average 1945-49 ^r	1955	1956	Average 1945-49 ^r	1955	1956	Average 1945-49 ^r	1956
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	\$'000	\$'000
Buckwheat	179	127	168	3,642	2,334	3,177	3,896	3,665
New Brunswick.....	11	7	6	267	173	162	325	202
Quebec.....	56	44	47	1,116	931	1,209	1,279	1,560
Ontario.....	109	41	53	2,212	845	1,188	2,229	1,378
Manitoba.....	3	35	62	48	385	618	62	525
Mixed Grains	1,226	1,705	1,560	44,046	65,990	66,608	36,988	56,001
Prince Edward Island...	48	79	57	1,878	2,765	2,755	1,590	2,342
Nova Scotia.....	4	10	10	139	363	466	135	489
New Brunswick.....	3	7	5	97	192	254	79	241
Quebec.....	189	199	194	4,921	6,010	7,256	4,852	8,127
Ontario.....	916	1,120	984	35,438	47,600	44,292	29,194	37,205
Manitoba.....	18	51	67	496	1,326	2,342	364	1,499
Saskatchewan.....	13	60	49	255	1,800	1,680	192	1,092
Alberta.....	33	176	189	736	5,800	7,333	512	4,840
British Columbia.....	2	3	5	86	134	230	70	166
Flaxseed	1,161	1,838	3,041	9,502	19,748	34,463	37,188	88,277
Ontario.....	39	16	17	463	194	227	1,879	638
Manitoba.....	449	531	789	4,267	4,600	8,000	16,732	20,720
Saskatchewan.....	526	1,030	1,710	3,360	11,850	19,000	12,872	48,830
Alberta.....	146	248	511	1,373	3,000	7,100	5,555	17,750
British Columbia.....	4	13	14	39	104	136	149	339
				'000 lb.	'000 lb.	'000 lb.		
Sunflower Seed	29	18	33	16,312	14,400	16,500	952	693
Manitoba.....	29	18	33	16,312	14,400	16,500	952	693
Rapeseed	40	136	352	29,663	77,395	300,468	1,746	10,541
Manitoba.....	—	5	29	3,380	3,380	24,153	—	870
Saskatchewan.....	40	123	297	29,663	69,495	252,450	1,746	8,836
Alberta.....	—	8	26	—	4,520	23,865	—	835
				'000 bu.	'000 bu.	'000 bu.		
Shelled Corn	244	507	509	11,038	31,510	27,814	14,056	33,377
Ontario.....	231	500	502	10,734	31,300	27,636	13,726	33,163
Manitoba.....	13	7	7	304	210	178	330	214
Potatoes	417	308	312	66,173	66,127	68,932	72,522	77,914
Prince Edward Island...	46	43	42	9,988	11,825	11,688	7,746	10,378
Nova Scotia.....	16	12	10	2,945	2,952	2,397	3,436	2,948
New Brunswick.....	61	47	46	14,550	15,510	15,246	13,241	12,899
Quebec.....	118	92	99	14,927	16,210	16,881	17,485	21,271
Ontario.....	92	58	54	13,339	10,730	10,998	16,877	15,178
Manitoba.....	21	19	16	2,342	2,565	3,052	2,371	2,746
Saskatchewan.....	24	12	15	2,050	1,300	2,025	2,570	2,770
Alberta.....	23	16	20	2,799	2,450	3,705	3,706	4,802
British Columbia.....	16	9	10	3,233	2,585	2,940	5,089	4,922
				'000 tons	'000 tons	'000 tons		
Field Roots	72	42	40	725²	439	425	12,845	9,033
Prince Edward Island...	8	6	7	119	92	85	1,906	1,377
Nova Scotia.....	6	4	4	72	62	56	1,732	1,554
New Brunswick.....	7	3	3	66	38	30	1,086	853
Quebec.....	14	11	10	114	78	83	2,712	2,357
Ontario.....	36	18	16	343	169	171	5,409	2,907
Tame Hay	10,535	11,055	10,922	16,729	20,614	19,655	250,847	302,698
Prince Edward Island...	221	205	205	333	410	422	4,620	5,064
Nova Scotia.....	403	357	314	699	821	691	11,773	12,438

For footnotes, see end of table, p. 429.

12.—Acreages, Production and Values of Principal Field Crops by Province 1955 and 1956 and Five-Year Average 1945-49—concluded

Province	Area			Total Production			Gross Farm Value ¹	
	Average 1945-49 ²	1955	1956	Average 1945-49 ²	1955	1956	Average 1945-49 ²	1956
	'000 ac.	'000 ac.	'000 ac.	'000 tons	'000 tons	'000 tons	\$'000	\$'000
Tame Hay—concl.								
New Brunswick.....	534	458	399	748	916	758	11,849	9,854
Quebec.....	3,959	3,725	3,487	5,526	6,854	6,102	87,681	94,581
Ontario.....	3,371	3,407	3,290	6,128	6,235	6,416	86,292	97,844
Manitoba.....	324	524	634	556	1,048	1,268	6,021	12,680
Saskatchewan.....	481	632	647	681	1,150	1,068	9,029	14,685
Alberta.....	940	1,422	1,614	1,370	2,400	2,276	19,053	35,278
British Columbia.....	302	325	332	688	780	654	14,530	20,274
Fodder Corn.....	404	366	394	3,509	3,423	3,450	17,951	16,519
Quebec.....	71	69	79	605	727	631	4,172	4,291
Ontario.....	308	274	290	2,790	2,543	2,653	12,910	11,010
Manitoba.....	16	20	19	58	121	98	422	588
Saskatchewan.....	5	1	2	14	3	6	137	72
British Columbia.....	4	2	4	42	29	62	309	558
Sugar Beets.....	66	82	79	690	981	893	9,080	15,050
Quebec.....	3	6	6	27	77	55	344	823
Ontario.....	22	19	14	219	268	145	2,950	2,205
Manitoba.....	11	21	23	90	206	229	1,113	3,435
Alberta.....	30	36	36	354	430	464	4,672	8,587

¹Total values for eight principal field crops are contained in Table 11; the total values for the remaining field crops and the values by province may be obtained from the *Quarterly Bulletin of Agricultural Statistics*. ²Includes British Columbia.

13.—Acreages and Production of Grain in the Prairie Provinces 1952-56

NOTE.—Figures for years before 1952 will be found in the corresponding table of previous editions of the Year Book.

Grain	Acreages					Production				
	1952	1953	1954	1955	1956	1952	1953	1954	1955	1956
	'000 acres	'000 acres	'000 acres	'000 acres	'000 acres	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.
Wheat.....	25,372	25,517	24,707 ^r	21,964 ^r	22,064	678,000	604,000 ^r	305,000	497,000	551,000
Oats.....	7,560	6,490	6,715	7,788	8,658	346,000	276,000	196,000	290,000	400,000
Barley.....	8,145	8,599	7,568	9,638	8,181	281,000	251,000	167,000	244,000	262,000
Rye.....	1,193	1,411	753	707	452	23,200	26,850	12,179	13,350	6,500
Flaxseed.....	1,047	926	1,177	1,809	3,010	11,300	9,300	10,950	19,450	34,100

Stocks of Grain in Canada.—Table 14 shows the stocks of Canadian grain on hand in Canada and in the United States on July 31 for the years 1951-56, with averages for the five-year periods 1935-39, 1940-44 and 1945-49. Stocks in Canada are separated into those in commercial positions and those on farms. Stocks on farms and in country elevators in the Prairie Provinces are given separately.

14.—Carryover of Canadian Grain as at July 31, 1952-56 and Five-Year Averages 1935-49

NOTE.—Figures for individual years before 1952 will be found in the corresponding table of previous editions of the Year Book.

As at July 31—	Total in Canada and United States	Total in Canada	In Commercial Storage in Canada	On Farms in Canada	Prairie Provinces	
					On Farms	In Country Elevators
	bu.	bu.	bu.	bu.	bu.	bu.
Wheat—						
Av. 1935-39.....	101,142,053	92,273,005	86,848,305	5,424,700	4,328,000	18,075,723
Av. 1940-44.....	431,102,442	408,734,141	351,531,341	57,152,800	54,960,000	154,370,863
Av. 1945-49.....	119,587,196	115,603,876	82,718,676	32,885,200	31,265,600	24,698,778
1952.....	217,177,826	214,934,143	195,672,143	19,262,000	18,000,000	98,782,136
1953.....	383,185,486	382,545,625	288,829,625	93,716,000	91,000,000	154,702,768
1954.....	618,675,202 ^r	618,567,923 ^r	386,707,923	231,860,000 ^r	228,000,000 ^r	211,475,266 ^r
1955.....	536,748,472	536,302,394	375,368,811	137,855,000	134,000,000	221,665,852
1956.....	579,573,811	578,802,924	374,597,924	204,205,000	202,000,000	234,727,789
Oats—						
Av. 1935-39.....	30,700,483	30,682,283	6,229,883	24,452,400	12,585,600	1,361,855
Av. 1940-44.....	74,984,299	74,212,213	16,435,613	57,776,600	43,826,600	6,500,924
Av. 1945-49.....	70,725,656	69,841,382	18,954,582	50,886,800	41,042,800	5,091,295
1952.....	108,358,284	104,861,518	47,025,518	57,836,000	45,000,000	25,455,272
1953.....	144,409,075	143,525,521	52,865,521	90,660,000	78,500,000	33,504,134
1954.....	125,768,957	125,768,957	28,518,957	97,250,000	85,000,000	19,848,364
1955.....	83,967,243	83,967,243	30,567,243	53,400,000	40,000,000	16,516,871
1956.....	119,105,841	118,285,166	47,085,166	71,200,000	60,000,000	24,269,986
Barley—						
Av. 1935-39.....	8,096,869	7,827,168	4,182,808	3,644,360	2,500,800	711,449
Av. 1940-44.....	29,922,222	28,868,755	12,191,755	16,677,000	15,463,000	4,138,057
Av. 1945-49.....	29,747,854	29,512,098	12,702,098	16,810,000	16,140,000	3,842,261
1952.....	79,503,741	79,286,664	57,810,664	21,476,000	21,000,000	26,916,163
1953.....	111,666,834	111,260,514	73,025,514	38,235,000	37,000,000	47,738,023
1954.....	145,910,370	145,910,370	49,100,370	96,810,000	95,000,000	31,750,779
1955.....	91,488,186	91,488,186	49,178,186	42,310,000	40,000,000	32,095,796
1956.....	110,947,935	110,947,935	60,482,935	50,465,000	49,000,000	33,152,220
Rye—						
Av. 1935-39.....	2,236,368	1,940,370	1,763,390	176,980	149,000	373,309
Av. 1940-44.....	6,897,205	4,942,647	3,260,247	1,682,400	1,617,800	1,172,857
Av. 1945-49.....	3,273,777	3,123,572	2,023,372	1,100,200	1,053,400	544,436
1952.....	8,094,397	7,517,089	6,171,089	1,346,000	1,300,000	2,232,344
1953.....	16,190,618	15,288,159	12,133,159	3,155,000	3,050,000	3,417,245
1954.....	19,285,477	19,285,477	6,425,477	12,860,000	12,700,000	3,616,842
1955.....	18,484,653	18,394,103	8,214,103	10,180,000	10,000,000	3,148,206
1956.....	15,313,037	15,239,314	6,134,314	9,105,000	9,000,000	3,392,699
Flaxseed—						
Av. 1935-39.....	277,016	277,016	271,356	5,660	5,000	64,481
Av. 1940-44.....	1,923,885	1,923,885	1,667,525	256,360	251,700	373,895
Av. 1945-49.....	3,888,325	3,888,325	3,423,525	464,800	461,400	240,711
1952.....	2,588,918	2,588,918	2,054,918	534,000	515,000	526,003
1953.....	3,939,420	3,939,420	2,468,420	1,471,000	1,450,000	972,940
1954.....	2,577,712	2,577,712	1,547,712	1,030,000	1,000,000	441,588
1955.....	1,254,064	1,254,064	909,064	325,000	300,000	98,586
1956.....	2,507,471	2,507,471	2,067,471	440,000	440,000	239,523

Subsection 4.—Livestock

The numbers of livestock on farms in the different provinces for 1956 and 1957 are given in Table 15 and the average value per head of farm livestock is given, by province, in Table 16.

15.—Livestock on Farms by Province at June 1, 1956 and 1957

Province and Item	1956 ¹	1957	Province and Item	1956 ¹	1957
	No.	No.		No.	No.
Newfoundland.....	..	..	Nova Scotia—		
Prince Edward Island—			Horses.....	17,865	16,700
Horses.....	14,557	13,800	Milk cows ²	82,805	79,000
Milk cows ²	43,811	43,500	Other cattle.....	104,620	98,000
Other cattle.....	79,889	79,500	Sheep.....	83,215	83,000
Sheep.....	33,356	33,000	Swine.....	32,670	31,000
Swine.....	46,676	45,000			

For footnotes, see end of table.

15.—Livestock on Farms by Province at June 1, 1956 and 1957—concluded

Province and Item	1956 ¹	1957	Province and Item	1956 ¹	1957
No.	No.	No.	No.	No.	No.
New Brunswick—			Saskatchewan—		
Horses.....	19,256	18,200	Horses.....	170,769	160,000
Milk cows ²	85,581	84,000	Milk cows ²	272,226	261,000
Other cattle.....	98,064	97,000	Other cattle.....	1,596,806	1,659,000
Sheep.....	63,980	66,000	Sheep.....	142,696	154,000
Swine.....	53,856	52,000	Swine.....	591,902	633,000
Quebec—			Alberta—		
Horses.....	163,565	155,000	Horses.....	154,672	140,000
Milk cows ²	1,054,297	1,080,000	Milk cows ²	282,200	280,000
Other cattle.....	947,882	960,000	Other cattle.....	2,167,011	2,320,000
Sheep.....	338,600	331,000	Sheep.....	404,820	450,000
Swine.....	887,094	874,000	Swine.....	1,211,508	1,300,000
Ontario—			British Columbia—		
Horses.....	139,661	130,000	Horses.....	26,729	25,400
Milk cows ²	1,025,907	1,012,000	Milk cows ²	90,157	87,500
Other cattle.....	1,875,763	1,958,000	Other cattle.....	332,702	312,500
Sheep.....	393,811	387,000	Sheep.....	86,053	86,000
Swine.....	1,548,280	1,565,000	Swine.....	48,472	41,000
Manitoba—			Yukon and N.W.T.		
Horses.....	75,055	71,000	Totals—		
Milk cows ²	222,990	220,000	Horses.....	782,129	730,100
Other cattle.....	648,490	665,000	Milk cows ²	3,159,974	3,147,000
Sheep.....	73,123	71,000	Other cattle.....	7,851,227	8,149,000
Swine.....	310,423	316,000	Sheep.....	1,619,654	1,661,000
			Swine.....	4,730,881	4,857,000

¹ Census figures.² Cows and heifers, two years old or over, kept for milk purposes.16.—Average Value per Head of Farm Livestock by Province 1956 and 1957
(Exclusive of Newfoundland and the Yukon and Northwest Territories)

Province and Item	1956	1957	Province and Item	1956	1957
\$	\$	\$	\$	\$	\$
Prince Edward Island—			Manitoba—		
Horses.....	91	92	Horses.....	82	85
All cattle.....	87	83	All cattle.....	100	98
Milk cows ¹	131	127	Milk cows ¹	141	137
Other cattle.....	62	59	Other cattle.....	86	85
Sheep.....	15	15	Sheep.....	15	15
Swine.....	25	31	Swine.....	22	29
Nova Scotia—			Saskatchewan—		
Horses.....	119	119	Horses.....	65	74
All cattle.....	89	88	All cattle.....	97	98
Milk cows ¹	124	123	Milk cows ¹	140	139
Other cattle.....	61	60	Other cattle.....	90	91
Sheep.....	15	13	Sheep.....	14	16
Swine.....	26	28	Swine.....	21	27
New Brunswick—			Alberta—		
Horses.....	119	121	Horses.....	64	72
All cattle.....	91	85	All cattle.....	97	101
Milk cows ¹	130	118	Milk cows ¹	148	152
Other cattle.....	58	56	Other cattle.....	90	95
Sheep.....	15	16	Sheep.....	16	17
Swine.....	26	31	Swine.....	23	33
Quebec—			British Columbia—		
Horses.....	148	152	Horses.....	77	82
All cattle.....	95	95	All cattle.....	97	102
Milk cows ¹	130	129	Milk cows ¹	139	146
Other cattle.....	55	56	Other cattle.....	86	90
Sheep.....	14	14	Sheep.....	17	18
Swine.....	25	30	Swine.....	27	29
Ontario—			Totals—		
Horses.....	109	120	Horses.....	95	102
All cattle.....	115	120	All cattle.....	101	103
Milk cows ¹	155	164	Milk cows ¹	141	144
Other cattle.....	93	97	Other cattle.....	85	88
Sheep.....	19	20	Sheep.....	16	17
Swine.....	26	34	Swine.....	24	32

¹ Cows and heifers, two years old or over, kept for milk purposes.

The Federal Department of Agriculture inspects all livestock in plants designated as inspected establishments under the Meat and Canned Foods Act. A statistical record is kept of these inspections and details are given in Table 17. Local wholesale butchering and slaughtering carried out by retail butchers and by farmers for their own use are not included. Actually the slaughtering and meat packing industry is concentrated into a comparatively small number of large establishments to facilitate greater efficiency and utilization of products; thus the figures of Table 17 are fairly inclusive. The slaughtering and meat packing industry is dealt with in its proper relation to all other manufacturing enterprises in Chapter XV of this volume. On a gross value basis it normally ranks among the three largest manufacturing industries in Canada but it owes its importance to the value of raw products obtained from the farmer and the rancher rather than to the value added by the manufacturing process.

17.—Livestock Slaughtered at Inspected Establishments 1941-55 and by Month 1956

(Exclusive of Newfoundland)

Year	Cattle	Calves	Sheep	Hogs	Year and Month	Cattle	Calves	Sheep	Hogs
	No.	No.	No.	No.	1956	No.	No.	No.	No.
1941.....	1,003,691	727,829	828,603	6,280,345	January.....	141,694	42,828	36,953	493,000
1942.....	970,415	666,672	825,368	6,196,850	February....	128,553	41,980	27,813	449,128
1943.....	1,021,054	594,087	889,317	7,168,525	March.....	159,918	87,933	32,385	590,117
1944.....	1,354,121	661,245	959,169	8,766,417	April.....	135,783	106,643	22,030	494,319
1945.....	1,891,024	787,626	1,185,161	5,681,629	May.....	137,904	98,914	15,008	458,211
1946.....	1,668,441	752,343	1,213,235	4,252,591	June.....	169,028	96,640	25,420	523,161
1947.....	1,291,759	665,311	900,766	4,452,816	July.....	142,732	66,487	30,940	375,160
1948.....	1,489,883	787,410	768,943	4,487,649	August.....	147,117	68,530	54,618	352,178
1949.....	1,439,489	766,277	629,673	4,098,609	September...	187,563	85,605	96,615	449,958
1950.....	1,284,683	773,205	521,089	4,405,055	October.....	162,983	69,863	97,761	414,594
1951.....	1,149,789	583,718	438,518	4,488,007	November...	177,304	68,835	107,996	451,356
1952.....	1,237,630	567,760	512,966	6,234,145	December...	173,784	57,357	52,435	497,107
1953.....	1,469,406	740,723	543,371	4,611,312					
1954.....	1,635,008	820,506	562,555	4,679,214					
1955.....	1,702,108	828,658	591,566	5,543,787					
					Totals, 1956.	1,874,363	891,615	599,974	5,548,289

Wool.—Canada's wool requirements are largely met by imports which amounted to 58,226,000 lb. (greasy basis) in 1956 and 53,954,000 lb. in 1955. Exports amounted to 3,594,000 lb. in 1956 and 2,883,000 lb. in 1955. The apparent domestic consumption of wool shown in Table 18 is determined on the basis of production, exports and imports but does not take into consideration changes in stocks for which the data are not available. Differences in wool utilization between years are therefore probably less marked than indicated by these figures.

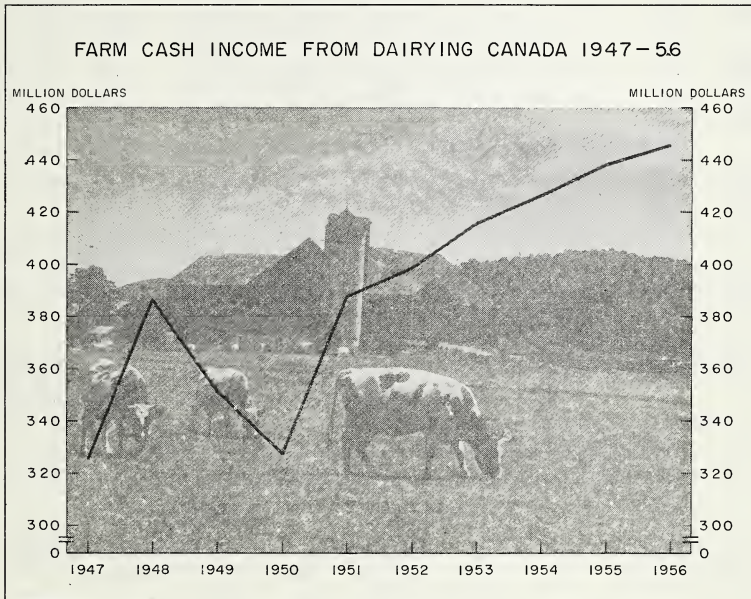
18.—Production and Apparent Consumption of Wool 1953-56

Item	1953	1954	1955	1956 ¹
Shorn Wool—				
Yield per fleece.....	7.4	7.4	7.4	7.3
Total yield shorn.....	6,355	6,496	6,446	6,165
Price per pound.....	38.6	37.7	35.3	37.8
Total value of shorn wool.....	2,450	2,451	2,277	2,328
Total pulled wool.....	1,862	1,555	1,595	1,707
Total wool production.....	8,217	8,051	8,041	7,872
Apparent consumption.....	67,649	46,788	59,112	62,504

¹ Census figures.

Subsection 5.—Dairying

Milk Production.—Milk production in 1956 amounted to 17,303,082,000 lb., an increase of 4,611,000 lb. over the previous year. The proportion of the total milk production used for factory-made dairy products decreased to 55.7 p.c. in 1956 from 57.1 p.c. in 1955. The proportion sold in fluid form was 32.3 p.c. in 1956 compared with 30.8 p.c. in 1955. Milk used for all purposes on farms (home consumed, manufactured and fed) was 12.0 p.c. in both years.



19.—Production and Utilization of Milk by Province 1954-56

Province and Year	Used in Manufacture		Milk Otherwise Used			Total Milk Production
	On Farms	In Factories	Fluid Sales	Farm-Home Consumed	Fed on Farms	
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland.....	..	..	..	..	..	..
Prince Edward Island.....	1954 ^r 8,518	160,586	27,687	20,240	6,552	223,583
	1955 8,471	154,983	27,665	19,790	6,143	217,052
	1956 7,862	159,371	27,259	19,960	5,224	219,676
Nova Scotia.....	1954 ^r 24,196	179,207	174,669	49,030	14,204	441,306
	1955 22,932	171,520	182,054	49,280	15,618	441,404
	1956 22,464	169,211	190,046	49,250	15,548	446,519
New Brunswick.....	1954 ^r 42,237	229,303	148,083	45,880	9,459	474,962
	1955 41,548	226,893	152,676	52,030	7,655	480,602
	1956 43,196	223,858	157,852	51,540	5,074	481,520

19.—Production and Utilization of Milk by Province 1954-56—concluded

Province and Year	Used in Manufacture		Milk Otherwise Used			Total Milk Production
	On Farms	In Factories	Fluid Sales	Farm-Home Consumed	Fed on Farms	
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Quebec.....1954 ^r	90,394	3,411,494	1,918,934	276,200	116,660	5,813,682
1955	79,794	3,566,918	2,000,226	285,500	127,880	6,060,318
1956	82,930	3,585,517	2,114,768	293,400	132,600	6,209,215
Ontario.....1954 ^r	31,590	3,293,649	1,721,583	223,900	175,100	5,445,822
1955	24,780	3,325,694	1,804,780	227,200	160,770	5,543,224
1956	25,670	3,209,803	1,871,294	237,500	148,050	5,492,317
Manitoba.....1954 ^r	46,777	629,657	219,389	97,470	52,380	1,045,673
1955	48,883	629,689	234,114	100,950	48,890	1,062,526
1956	46,894	589,822	243,385	100,100	45,790	1,025,991
Saskatchewan.....1954 ^r	126,266	657,725	248,045	169,700	95,520	1,297,256
1955	127,366	661,071	256,022	166,600	83,100	1,294,159
1956	127,343	621,339	270,063	161,400	85,440	1,265,585
Alberta.....1954 ^r	68,866	815,258	271,206	132,400	102,970	1,390,700
1955	64,139	837,841	286,155	137,100	104,880	1,430,115
1956	63,882	813,981	304,220	133,500	98,810	1,414,393
British Columbia.....1954 ^r	17,152	326,064	370,908	33,380	21,660	769,164
1955	17,129	310,627	386,445	33,980	20,890	769,071
1956	14,742	266,006	410,358	34,670	22,090	747,866
Totals.....1954^r	455,996	9,702,943	5,100,504	1,048,200	594,505	16,902,148
1955	434,842	9,885,236	5,330,137	1,072,430	575,826	17,298,471
1956	434,983	9,638,908	5,589,245	1,081,320	558,626	17,303,062

20.—Farm Values of Milk Production by Province 1954-56

Province and Year	Value of Milk Used in Manufacture		Value of Milk Otherwise Used			Value of Total Milk Production
	On Farms	In Factories	Fluid Sales	Farm-Home Consumed	Fed on Farms	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	..	..	..	..	..	..
Prince Edward Island.....1954 ^r	218	3,344	1,016	494	577	5,649
1955	217	3,314	1,032	493	583	5,639
1956	202	3,401	1,005	487	563	5,658
Nova Scotia.....1954 ^r	589	4,090	7,725	1,402	978	14,784
1955	549	3,845	8,061	1,390	978	14,823
1956	557	3,722	8,372	1,359	945	14,955
New Brunswick.....1954 ^r	1,065	4,853	6,618	1,225	1,010	14,771
1955	1,060	4,788	6,812	1,410	1,063	15,133
1956	1,108	4,641	7,004	1,371	985	15,109
Quebec.....1954 ^r	2,279	77,049	76,676	7,292	10,996	174,292
1955	1,978	79,907	80,311	7,452	11,523	181,171
1956	2,056	80,435	83,590	7,570	11,314	184,965
Ontario.....1954 ^r	824	70,204	72,649	5,441	8,789	157,907
1955	635	70,380	75,236	5,453	8,245	159,949
1956	658	71,113	78,730	5,724	7,654	163,879
Manitoba.....1954 ^r	1,119	12,669	8,126	2,300	3,477	27,691
1955	1,170	12,616	8,656	2,372	3,396	28,210
1956	1,122	11,843	9,020	2,342	3,166	27,493

20.—Farm Values of Milk Production by Province 1954-56—concluded

Province and Year	Value of Milk Used in Manufacture		Value of Milk Otherwise Used			Value of Total Milk Production
	On Farms	In Factories	Fluid Sales	Farm-Home Consumed	Fed on Farms	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$' 000
Saskatchewan.....1954 ^r	3,022	13,492	9,700	3,954	4,381	34,549
1955	3,048	13,631	10,029	3,898	4,108	34,714
1956	2,993	12,749	10,370	3,761	4,040	33,913
Alberta.....1954 ^r	1,648	17,316	11,582	3,178	4,879	38,603
1955	1,535	17,949	12,195	3,277	4,757	39,713
1956	1,529	17,345	12,689	3,204	4,747	39,514
British Columbia.....1954 ^r	418	9,019	19,398	935	761	30,531
1955	425	8,848	19,928	958	732	30,891
1956	365	7,881	21,100	946	672	30,964
Totals.....1954^r	11,182	212,036	213,490	26,221	35,848	498,777
1955	10,617	215,278	222,260	26,703	35,385	510,243
1956	10,590	213,130	231,880	26,764	34,086	516,450

Butter, Cheese and Other Dairy Products.—Butter production in 1956 amounted to 323,680,000 lb., 15,297,000 lb. less than in 1955. Of the total, 303,248,000 lb. was creamery butter, 18,589,000 lb. dairy or farm-made butter and 1,843,000 lb. whey butter.

Factory cheese production in 1956 was estimated at 93,082,000 lb., an increase of 6.3 p.c. over the 1955 estimate but 55.1 p.c. below the peak production of 207,431,000 lb. in 1942. Exports of cheese, mostly cheddar, amounted to 12,217,000 lb. in 1956 and 13,739,000 lb. in 1955 as compared with 135,409,000 lb. in 1945.

The over-all production of concentrated milk products increased to its highest level in 1956. The production of ice cream during 1956 increased about 807,000 gal. over that of 1955.

21.—Production of Butter and Cheese by Province 1954-56

Province and Year	Butter				Cheese
	Creamery	Dairy	Whey	Total	Factory ¹
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland.....	..	..	..	..	..
Prince Edward Island.....1954 ^r	6,125	364	17	6,506	916
1955	5,836	362	—	6,198	683
1956	5,645	336	12	5,993	856
Nova Scotia.....1954 ^r	6,152	1,034	—	7,186	—
1955	5,841	980	—	6,821	—
1956	5,653	960	—	6,613	—
New Brunswick.....1954 ^r	8,787	1,805	—	10,592	805
1955	8,713	1,767	—	10,480	757
1956	8,542	1,846	—	10,388	833
Quebec.....1954	119,801	3,863	166	123,830	18,276
1955	124,700	3,410	160	128,270	17,832
1956	122,337	3,544	208	126,089	25,085
Ontario.....1954 ^r	83,157	1,350	1,775	86,282	67,745
1955	84,207	1,059	1,634	86,900	64,133
1956	79,540	1,097	1,618	82,255	62,494
Manitoba.....1954	25,012	1,999	18	27,029	1,227
1955	25,018	2,089	18	27,125	1,043
1956	23,360	2,004	1	25,365	1,069

¹For footnote, see end of table, p. 436.

21.—Production of Butter and Cheese by Province 1954-56—concluded

Province and Year	Butter				Cheese
	Creamery	Dairy	Whey	Total	Factory ¹
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Saskatchewan.....1954	26,760	5,396	—	32,156	148
.....1955	26,836	5,443	—	32,279	93
.....1956	25,099	5,442	—	30,541	30
Alberta.....1954 ^r	30,369	2,943	5	33,317	2,580
.....1955	31,326	2,741	5	34,072	2,151
.....1956	30,220	2,730	4	32,954	1,933
British Columbia.....1954 ^r	7,067	733	—	7,800	787
.....1955	6,100	732	—	6,832	693
.....1956	2,852	630	—	3,482	562
Totals.....1954^r	313,230	19,487	1,981	334,698	92,587
.....1955	318,577	18,583	1,817	338,977	87,554
.....1956	303,248	18,589	1,843	323,680	93,082

¹ Factory-made cheese includes cheddar and other cheese made from whole milk and cream. Amounts for "other cheese" are included in Quebec and Ontario figures but as few as three firms reported in the other provinces data cannot be included, except in the Canada total.

22.—Production of Concentrated Milk Products 1952-56

(Exclusive of Newfoundland)

Product	1952	1953	1954 ^r	1955	1956
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Concentrated Whole Milk Products.....	350,195	323,320	331,021	348,467	365,477
Evaporated milk.....	305,715	272,009	280,350	294,938	305,058
Condensed milk.....	16,539	18,462	13,648	13,237	17,168
Whole milk powder.....	16,035	18,744	18,819	20,861	20,360
Miscellaneous whole milk products.....	11,906	14,105	18,204	19,431	22,891
Concentrated Milk By-products¹.....	122,856	116,466	119,216	126,132	118,543
Condensed skim milk.....	4,741	4,037	3,928	4,295	3,444
Evaporated skim milk.....	10,428	10,789	10,603	9,090	8,693
Skim milk powder.....	88,229	82,914	83,332	87,115	78,969
Condensed buttermilk.....	2,668	1,487	1,846	2,016	720
Buttermilk powder.....	6,606	6,565	6,665	6,599	7,715
Casein.....	2,898	4,885	6,165	6,351	7,807
Whey powder.....	6,288	4,909	5,187	9,345	10,986
Totals.....	473,051	439,786	450,237	474,599	484,020

¹ Includes sugar of milk (lactose).

23.—Production of Ice Cream by Province 1952-56

Province	1952	1953	1954	1955	1956	Province	1952	1953	1954	1955	1956
	'000 gal.	'000 gal.	'000 gal.	'000 gal.	'000 gal.		'000 gal.	'000 gal.	'000 gal.	'000 gal.	'000 gal.
Newfoundland.....	..	..	..	..	..	Manitoba.....	1,832	1,782	1,706	1,784	1,665
P. E. Island.....	196	175	166	179	174	Saskatchewan.....	1,748	1,818	1,748	1,876	1,963
Nova Scotia.....	1,478	1,411	1,388	1,363	1,385	Alberta.....	2,293	2,453	2,487	2,716	2,912
New Brunswick.....	867	850	871	862	869	British Columbia.....	2,964	3,058	3,054	3,317	3,804
Quebec.....	5,702	6,564	6,414	7,822	8,190	Totals.....	27,262	28,809	28,645	32,410	33,217
Ontario.....	10,182	10,698	10,811	12,491	12,255						

Domestic Disappearance of Dairy Products.—The estimated consumption of fluid milk and cream, on a milk basis, amounted to 5,040,998,000 pt. in 1956, 201,725,000 pt. higher than the 1955 consumption. The daily average consumption per capita was 0.88 pt. The estimated consumption of milk and cream is given by province in Table 24 and the domestic disappearance of all dairy products in Table 25.

24.—Estimated Consumption of Milk and Cream (expressed as Milk) by Province 1954-56

Province and Year	Estimated Consumption	Daily per Capita Consumption	Province and Year	Estimated Consumption	Daily per Capita Consumption
	'000 pt.	pt.		'000 pt.	pt.
Newfoundland.....	..	..	Manitoba.....1954 ^r	240,524	0.80
Prince Edward Island....1954	36,509	0.95	1955	254,295	0.82
1955	36,143	0.92	1956	260,608	0.84
1956	35,970	0.99	Saskatchewan.....1954 ^r	318,065	0.99
Nova Scotia.....1954 ^r	169,348	0.69	1955	321,659	0.99
1955	175,095	0.70	1956	328,187	1.02
1956	181,081	0.71	Alberta.....1954	306,566	0.81
New Brunswick.....1954 ^r	146,916	0.74	1955	321,450	0.83
1955	155,136	0.76	1956	332,242	0.81
1956	158,648	0.78	British Columbia.....1954 ^r	304,776	0.66
Quebec.....1954	1,657,027	1.03	1955	316,924	0.67
1955	1,725,364	1.05	1956	335,440	0.66
1956	1,817,616	1.07			
Ontario.....1954	1,468,089	0.80	Totals.....1954^r	4,647,820	0.86
1955	1,533,207	0.81	1955	4,839,273	0.87
1956	1,591,206	0.80	1956	5,040,998	0.88

25.—Domestic Disappearance of Dairy Products 1954-56

Product	1954 ^r		1955		1956	
	Total	Per Capita ¹	Total	Per Capita ¹	Total	Per Capita ¹
	'000 lb.	lb.	'000 lb.	lb.	'000 lb.	lb.
Milk and Cream.....	5,995,689	405.20	6,242,663	411.00	6,502,888	415.10
Milk.....	5,059,076	341.90	5,280,576	347.66	5,488,453	350.34
Cream as milk.....	936,613	63.30	962,087	63.34	1,014,435	64.76
Cream as product.....	198,064	13.39	203,162	13.38	210,298	13.42
Butter.....	314,719	20.71	321,933	20.63	334,049	20.78
Creamery.....	293,292	19.30	301,645	19.33	313,538	19.50
Dairy.....	19,487	1.28	18,583	1.19	18,589	1.16
Whey.....	1,940	0.13	1,705	0.11	1,922	0.12
Cheese.....	97,186	6.39	104,029	6.67	102,080	6.35
Cheddar.....	39,835	2.62	45,329	2.91	40,360	2.51
Process.....	44,422	2.92	44,648	2.86	44,244	2.75
Other.....	12,929	0.85	14,052	0.90	17,476	1.09
Concentrated Whole Milk Products²....	311,722	20.51	322,015	20.64	343,040	21.33
Evaporated.....	275,955	18.16	288,382	18.48	299,621	18.63
Condensed.....	12,348	0.81	11,926	0.76	14,978	0.93
Powdered.....	5,211	0.34	2,970	0.19	4,840	0.30

For footnotes, see end of table, p. 438.

25.—Domestic Disappearance of Dairy Products 1954-56—concluded

Product	1954 ¹		1955		1956	
	Total	Per Capita ¹	Total	Per Capita ¹	Total	Per Capita ¹
	'000 lb.	lb.	'000 lb.	lb.	'000 lb.	lb.
Concentrated Milk By-products^{3,4}.....	107,412	7.07	115,820	7.42	117,819	7.33
Evaporated.....	12,775	0.84	9,089	0.58	8,693	0.54
Condensed.....	4,023	0.26	4,330	0.28	3,428	0.21
Powdered.....	71,768	4.72	80,474	5.16	81,735	5.08
All Dairy Products in Terms of Milk—						
Butter.....	7,319,029	481.67	7,493,335	480.31	7,771,772	483.29
Cheese.....	923,247	60.76	988,919	63.39	985,125	61.26
Concentrated.....	741,831	48.82	752,004	48.20	802,924	49.93
Grand Totals⁵.....	15,465,503	1,028.41	16,026,854	1,038.15	16,626,514	1,044.64

¹ Includes Newfoundland for all manufactured dairy products.² Includes malted milk, cream

powder and substandard products of a variable fat content, items that do not appear separately in this table.

³ Includes milk by-products items not separately listed, i.e., condensed buttermilk, powdered buttermilk, sugar of milk, casein and powdered whey.⁴ Since the quantities used for human consumption and livestock feeding

cannot definitely be established, per capita figures include both.

⁵ Includes ice cream in terms of milk.

Subsection 6.—Poultry and Eggs

Statistics of production and consumption of poultry meat and eggs are given in Tables 26 to 28.

26.—Numbers and Values of Poultry on Farms by Province as at June 1, 1956 and 1957

Province and Year	Hens and Chickens		Turkeys		Geese		Ducks		Totals	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
	'000	\$'000	'000	\$'000	'000	\$'000	'000	\$'000	'000	\$'000
Newfoundland ¹.....1956	106	264	2	14	..	1	..	2	109	281
P. E. Island.....1956	812	795	14	33	9	22	5	7	840	857
1957	770	759	11	25	9	23	6	9	796	816
Nova Scotia.....1956	1,909	2,600	54	165	3	8	2	3	1,968	2,776
1957	1,832	2,466	56	142	2	6	1	2	1,891	2,616
New Brunswick.....1956	1,125	1,384	45	150	4	12	2	3	1,176	1,549
1957	1,090	1,350	42	149	4	13	2	3	1,138	1,515
Quebec.....1956	10,882	12,157	632	2,023	12	37	45	69	11,571	14,286
1957	11,300	12,170	610	1,817	10	30	40	64	11,960	14,081
Ontario.....1956	24,934	26,040	1,415	4,273	96	231	124	153	26,569	30,697
1957	27,825	26,403	1,650	3,809	96	222	124	143	29,695	30,577
Manitoba.....1956	5,990	4,573	664	1,458	48	91	40	41	6,742	6,163
1957	6,350	4,564	780	1,602	34	66	40	37	7,204	6,269
Saskatchewan...1956	8,219	6,021	773	1,697	52	113	78	86	9,122	7,917
1957	8,100	5,490	900	1,871	48	112	67	74	9,115	7,547
Alberta.....1956	9,444	7,146	820	1,956	86	184	99	110	10,449	9,396
1957	9,750	7,306	860	1,994	80	168	90	96	10,780	9,564
British Columbia...1956	4,221	4,978	354	1,032	14	41	24	37	4,613	6,088
1957	4,220	5,023	333	940	12	37	24	36	4,589	6,036
Totals.....1956	67,642	63,958	4,772	12,801	326	740	421	511	73,161	80,010
1957	71,237	63,331	5,242	12,349	295	677	394	464	77,168	79,021

¹ Census data; annual estimates are not available.

27.—Production, Utilization and Value of Farm Eggs by Province 1956

Province	Average Number of Layers ¹	Average Pro- duction per 100 Layers	Net Eggs Laid ²	Sold ³	Used by Pro- ducers ³	Value per Dozen ⁴	Total Value Sold and Used
	'000	No.	'000 doz.	'000 doz.	'000 doz.	cts.	\$'000
Newfoundland.....	..	17,470	5,995	5,213	782	36.6	2,197
Prince Edward Island.....	414	19,991	19,360	17,863	1,497	47.9	9,272
Nova Scotia.....	1,170	17,522	8,510	7,031	1,479	50.5	4,295
New Brunswick.....	587	17,850	50,544	50,618	8,926	46.5	27,717
Quebec.....	4,037	18,743	162,641	151,211	11,430	46.5	75,566
Ontario.....	10,503	17,113	33,090	28,629	4,461	35.3	11,685
Manitoba.....	2,344	15,769	38,577	28,607	9,970	33.4	12,879
Saskatchewan.....	2,970	16,603	45,526	37,253	8,273	34.9	15,877
Alberta.....	3,330	18,285	31,068	28,619	2,449	47.1	14,628
British Columbia.....	2,056						
Totals.....	27,411	17,865	404,311	355,044	49,267	43.1	174,116

¹ Hens and pullets over six months old.² Total laid less loss.³ Includes eggs used for hatching.⁴ Average value at farms for all purposes.

28.—Production and Domestic Disappearance of Eggs and Poultry 1956

Item	Net Production	Total Supply	Domestic Disappearance	Per Capita Consumption
	'000 doz.	'000 doz.	'000 doz.	doz.
Eggs.....	404,311	414,669	403,110¹	21.3
	'000 lb.	'000 lb.	'000 lb.	lb.
Poultry².....	480,986	556,152³	507,890³	31.6
Fowl and chickens.....	378,516	419,910	392,773	24.4
Turkeys.....	95,482	126,940	107,177	6.7
Geese.....	3,473	3,688	3,533	0.2
Ducks.....	3,515	5,062	4,817	0.3

¹ Includes hatching eggs.² Basis dressed weight.³ Includes stocks in transit and unclassified.

Subsection 7.—Fruit, Nursery Stock and Vegetables

Fruit.—Commercial fruit growing in Canada is confined almost exclusively to rather limited areas in the Provinces of Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia. Nova Scotia production is centred mainly in the Annapolis Valley and New Brunswick production in the St. John River Valley and Westmorland County. The fruit growing districts of Quebec are the Montreal area, the North Shore area, the Eastern Townships and the Quebec City district. Ontario fruit is grown in all the counties adjacent to the St. Lawrence River and the Great Lakes as far west as Georgian Bay, the Niagara district being the most productive. In British Columbia the four well defined fruit areas are the Okanagan Valley, the Fraser Valley, the Kootenay and Arrow Lakes district and Vancouver Island. The climate elsewhere in Canada is not generally suitable for commercial tree-fruit culture. In most producing areas, particularly in the Annapolis Valley of Nova Scotia, the Niagara Peninsula of Ontario and the Okanagan Valley of British Columbia, fruit growing is either the principal or one of the most important forms of agriculture and is of paramount importance to the economy of those areas. Apples and small fruits are produced commercially in the provinces named but tender tree fruits and commercial vineyards are largely limited to Ontario and British Columbia.

Strawberries are grown commercially in all provinces for which tree fruit statistics are prepared as well as in Prince Edward Island. However, this crop is produced over a somewhat wider area than are tree fruits. In Nova Scotia for example a considerable

volume of strawberries is grown in Colchester County and farther north as well as in the apple producing areas of the Annapolis Valley. In British Columbia most of the strawberries are grown in the Fraser Valley rather than in the predominantly tree-fruit producing area of the Okanagan Valley.

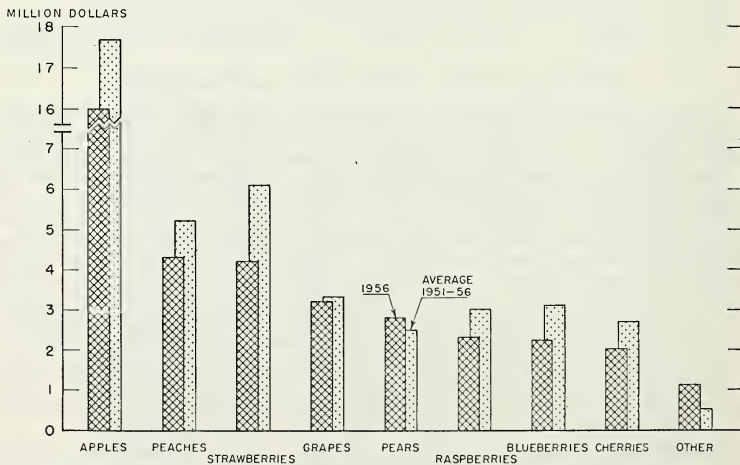
Raspberries are grown commercially in Nova Scotia, New Brunswick and Quebec but the bulk of the crop is produced in Ontario and British Columbia with the Fraser Valley of British Columbia being the most important single area in Canada.

Wild blueberries are harvested on a commercial scale in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick and Quebec. This crop is indigenous to certain lands in these areas. Individuals who harvest the wild berries may undertake to burn the land from time to time for weed control and to effect pruning. Dusting is often carried out to control insects, and bees are sometimes introduced to secure better pollination. A large percentage of the crop is frozen and exported. Some blueberries are picked for sale in other provinces but no statistics are available. There is also some production of cultivated blueberries, particularly in British Columbia.

A marketing system has been developed for distributing fresh fruit from the specialized production areas to all parts of the country and a large proportion of the deciduous fruit consumed in Canada is grown domestically. Considerable quantities of apples, strawberries and blueberries are exported annually, with the United States as the most important export market for Canadian fruit. Import restrictions by the United Kingdom have greatly reduced exports of Canadian fruit to that market in recent years.

Canning and processing industries have developed in the fruit growing districts and, although the importance of the processing market varies with different fruits, it provides a valuable outlet for substantial proportions of most Canadian grown fruit crops. Some canned fruits are exported.

FARM VALUE OF COMMERCIAL FRUIT PRODUCTION, CANADA 1956
COMPARED WITH 1951-56 AVERAGE



29.—Estimated Commercial Production and Farm Value of Fruit 1954-56

Kind of Fruit and Year	Quantity	Weight	Farm Value	Average Farm Price per Unit of Quantity ¹	Kind of Fruit and Year	Quantity	Weight	Farm Value	Average Farm Price per Unit of Quantity ¹
	'000 bu.	'000 lb.	\$'000	\$		'000 bu.	'000 lb.	\$'000	\$
Apples—					Cherries (sour)—				
1954 [*]	14,500	652,500	17,965	1.24	1954 [*]	426	21,300	2,114	4.96
1955.....	19,142	861,390	10,870	0.57	1955.....	542	27,100	2,208	4.07
1956.....	12,424	559,080	16,048	1.29	1956.....	292	14,600	1,253	4.29
Pears—					Strawberries—	'000 qt.			
1954 [*]	1,261	63,050	2,246	1.78	1954 [*]	27,971	37,267	6,870	0.25
1955.....	1,510	75,500	2,579	1.71	1955.....	22,674	30,223	5,910	0.26
1956.....	1,400	70,000	2,853	2.04	1956.....	19,112	24,300	4,240	0.22
Plums and Prunes—					Raspberries—				
1954 [*]	716	35,800	1,467	2.05	1954 [*]	12,839	18,356	3,131	0.24
1955.....	815	40,750	1,068	1.31	1955.....	12,099	17,411	2,775	0.23
1956.....	534	26,700	896	1.68	1956.....	6,656	9,193	2,320	0.35
Peaches—					Loganberries—	'000 lb.			
1954 [*]	2,425	121,250	5,208	2.15	1954 [*]	1,056	1,056	162	0.15
1955.....	2,883	144,150	6,125	2.12	1955.....	1,237	1,237	178	0.14
1956.....	1,667	83,350	4,384	2.63	1956.....	279	279	53	0.19
Apricots—					Grapes—				
1954 [*]	118	5,900	293	2.48	1954 [*]	88,876	88,876	3,926	0.04
1955.....	184	9,200	316	1.72	1955.....	94,752	94,752	3,622	0.04
1956.....	84	4,200	194	2.31	1956.....	80,274	80,274	3,293	0.04
Cherries (sweet)—					Blueberries—				
1954 [*]	174	8,700	1,307	7.51	1954 [*]	31,755	31,755	3,409	0.11
1955.....	221	11,050	1,295	5.86	1955.....	25,062	25,062	2,688	0.11
1956.....	96	4,800	823	8.57	1956.....	14,958	14,958	2,290	0.15

¹ Price to growers (to pickers in the case of blueberries) for unpacked fruit.

30.—Quantity and Value of Commercial Fruit Produced by Province 1954-56

Province	Quantity			Value ¹		
	1954 [*]	1955	1956	1954 [*]	1955	1956
	'000 lb.	'000 lb.	'000 lb.	\$'000	\$'000	\$'000
Newfoundland.....	1,949	481	597	125	38	48
Prince Edward Island.....	1,417	1,506	2,092	197	188	344
Nova Scotia.....	106,131	153,231	107,528	3,032	1,856	2,467
New Brunswick.....	15,781	24,368	18,037	998	849	1,177
Quebec.....	143,265	249,267	140,026	8,114	5,442	5,936
Ontario.....	429,949	511,105	367,110	21,896	18,935	18,116
British Columbia.....	387,318	397,867	256,344	13,736	12,326	10,559
Totals.....	1,085,810	1,337,825	891,734	48,098	39,634	38,647

¹ Farm value (to pickers in the case of blueberries) for unpacked fruit.

Nursery Stock.—Statistics concerning the nursery industry in Canada for the year ended June 30, 1956, are presented in Tables 31 and 32. All nurseries were asked to report quantities sold of stock propagated or imported during this period. Stock purchased from other nurseries in Canada was excluded to prevent duplication. A total of 127 nurseries reported in 1956 as compared with 155 in 1955. Provincial distribution was as follows: Ontario 63, Quebec 29, British Columbia 20, Manitoba 7, Saskatchewan 2, Alberta 2 and the Maritime Provinces 4.

31.—Nursery Stock Shipments by Type, Crop Years Ended June 30, 1955 and 1956

Classification	1954-55			1955-56		
	Domestic Shipments	Imported Shipments	Total	Domestic Shipments	Imported Shipments	Total
	No.	No.	No.	No.	No.	No.
Fruit Trees, Shrubs, Plants—						
Apple species.....	237,870	—	237,870	263,786	—	263,786
Tender tree fruit species.....	292,653	300	292,953	188,885	11,760	200,645
Small fruit species.....	3,293,784	—	3,293,784	3,113,033	14,566	3,127,599
Other species.....	327,773	—	327,773	491,857	—	491,857
Ornamental Species—						
Rose bushes.....	622,637	335,962	958,599	338,185	238,796	576,981
Other ornamental shrubs.....	2,537,801	459,251	2,997,052	2,077,170	413,232	2,490,402
Deciduous trees.....	289,780	15,688	305,468	377,351	15,115	392,466
Evergreen trees.....	505,329	253,762	759,091	545,952	180,352	726,304
Ornamental climbers.....	32,011	19,075	51,086	36,127	14,701	50,828
Bulbs and tubers.....	418,291	711,916	1,130,207	588,003	830,425	1,418,428
Herbaceous perennials.....	676,590	16,503	693,093	629,049	12,740	641,789

32.—Acreage of Nursery Stock by Province, Crop Years Ended June 30, 1955 and 1956

Province	1954-55		1955-56	
	Fruit Species	Ornamental Species	Fruit Species	Ornamental Species
	acres	acres	acres	acres
Quebec ¹	28.5	177.1	23.3	163.0
Ontario.....	573.0	1,446.9	515.2	1,222.3
Prairie Provinces.....	98.0	339.2	129.5	328.5
British Columbia.....	39.0	80.4	36.1	63.6
Totals.....	738.5	2,043.6	704.1	1,777.4

¹ Includes Maritime Provinces, for which insufficient information was reported.

Vegetables.—Estimates of acreage and production of commercial vegetables in Canada are prepared for all provinces except Newfoundland, Prince Edward Island and Saskatchewan. The Province of Ontario is the largest producer followed by Quebec and British Columbia. A wide variety of crops is grown in these three provinces while a somewhat smaller range of crops is produced in the Maritimes and the Prairie Provinces.

Canning, freezing and processing of vegetables are carried on in the important producing areas. The estimates in the following tables cover output of commercial growers only and do not include any acreages or production of vegetables grown for home use on farms or elsewhere. Except as otherwise provided for in footnotes, all statistics pertain to crops grown for the fresh market and for processing.

33.—Estimated Commercial Acreage of Vegetables by Province 1954-56

Province	1954	1955	1956
	acres	acres	acres
Nova Scotia ¹	3,780	4,230	3,720
New Brunswick ¹	830	890	950
Quebec.....	46,050	53,870	52,440
Ontario.....	94,850	110,760	106,160
Manitoba.....	5,240	5,640	5,620
Alberta.....	8,800	8,710	10,890
British Columbia.....	14,910	14,380	17,860
Totals.....	174,460	198,480	197,640

¹ Acreages of peas in New Brunswick are included in Nova Scotia figure, which also includes Prince Edward Island acreages for 1955 and 1956.

34.—Estimated Commercial Acreage and Production of Vegetables 1954-56 with Average for 1949-53

Vegetable	Av. 1949-53		1954		1955		1956	
	Area	Production	Area	Production	Area	Production	Area	Production
	acres	'000 lb.	acres	'000 lb.	acres	'000 lb.	acres	'000 lb.
Asparagus.....	2,600	5,788	3,530	6,206	3,680	7,228	3,770	7,187
Beans ¹	8,100	38,789	8,920	39,413	9,580	34,810	9,180	38,485
Beets.....	3,010	49,707	3,400	49,966	3,570	48,442	3,770	54,282
Cabbage.....	6,740	116,871	6,200	107,512	6,570	97,757	6,930	123,707
Carrots.....	7,810	142,105	8,000	136,747	8,560	152,578	8,720	166,116
Cauliflower.....	2,560	28,737	2,440	25,498	2,420	24,157	2,590	24,311
Celery.....	2,250	54,569	2,600	55,141	2,450	55,785	2,430	45,036
Corn ²	50,830	239,884	39,380	211,608	44,620	252,820	44,390	216,074
Lettuce.....	4,640	61,185	5,750	76,844	5,010	54,535	4,840	48,565
Onions.....	6,950	129,678	6,210	110,305	6,040	117,904	5,870	99,701
Peas ³	39,320	83,749	47,590	87,990	59,160	116,985	54,280	101,945
Spinach.....	1,430	13,611	1,430	12,895	1,230	13,347	1,130	13,056
Tomatoes.....	48,390	642,049	39,010	569,728	45,590	698,385	49,740	594,629

¹ Estimates apply only to that portion of the crop grown for processing in Manitoba in 1953; Ontario, Manitoba and Alberta in 1954; Quebec, Ontario, Manitoba and Alberta in 1955 and 1956. ² Estimates apply only to that portion of the crop grown for processing in Manitoba in 1953; Ontario and Manitoba in 1954; Quebec and Manitoba in 1955 and 1956. ³ Estimates apply only to that portion of the crop grown for processing in Ontario and Manitoba in 1953; Ontario, Manitoba and Alberta in 1954; and all provinces except British Columbia in 1955 and 1956.

Subsection 8.—Special Crops

Tobacco.—The chief tobacco growing area of Canada is located in southern Ontario in the counties adjacent to Lake Erie. Most of the cigarette tobacco comes from this district. In Ontario in 1956, 111,400 acres of flue-cured or Bright Virginia type tobacco and 4,496 acres of Burley tobacco were harvested. These are the most important types grown in Canada though dark air-cured and fire-cured tobacco as well as cigar tobacco are grown on a limited scale. The only other important production comes from Quebec. In 1956, 6,139 acres of flue-cured tobacco, 3,235 acres of cigar tobacco and 1,917 acres of pipe tobacco were harvested in that Province.

A study of Department of National Revenue reports on tax-paid withdrawals of tobacco products reveals changes in the smoking habits of Canadians during the past three decades. In 1922, the first year for which comparable figures are available, Canadian per capita consumption of cigarettes was 229, cigars 20, cut tobacco 1.3 lb., plug tobacco 1.1 lb. and snuff about 1.3 oz. By 1956 the annual per capita consumption of cigarettes had increased to 1,678, cigars had dropped to 15.9, cut tobacco went up to 1.6 lb. in 1954 but declined to 1.3 lb. in 1956 and plug tobacco declined considerably in 1956.

**35.—Acreage, Production and Value of the Commercial Crop of Leaf Tobacco by Province
1954-56 with Average for 1949-53**

Year	Quebec			Ontario			British Columbia		
	Har-vested Area	Pro-duction	Value	Har-vested Area	Pro-duction	Value	Har-vested Area	Pro-duction	Value
	acres	'000 lb.	\$	acres	'000 lb.	\$	acres	'000 lb.	\$
Av. 1949-53.	9,010	8,885	2,655,000	95,404	129,558	55,174,800	103	120	45,000
1954.....	10,863	11,110	3,579,000	120,804	173,569	74,174,000	88	84	35,000
1955.....	12,987	13,766	4,117,000	96,833	120,981	53,531,000	89	93	37,000
1956.....	11,291	10,783	3,368,000	116,356	159,396	72,604,000	75	99	40,000

**36.—Acreage, Production and Value of the Commercial Crop of Leaf Tobacco
by Main Type 1954-56 with Average for 1949-53**

Type of Tobacco and Year	Harvested Area	Average Yield per Acre	Total Production	Average Farm Price per lb.	Gross Farm Value
	acres	lb.	lb.	cts.	\$
Flue-cured.....Av. 1949-53	95,190	1,330	126,648,000	43.2	54,735,000
1954	122,815	1,410	173,159,000	43.1	74,777,000
1955	98,311	1,202	118,206,000	45.3	53,535,000
1956	117,614	1,339	157,480,000	46.1	72,611,000
Burley.....Av. 1949-53	4,204	1,369	5,756,000	30.3	1,745,000
1954	3,122	1,431	4,470,000	30.2	1,353,000
1955	4,033	1,737	7,005,000	30.1	2,109,000
1956	4,496	1,563	7,028,000	31.4	2,210,000
Cigar leaf.....Av. 1949-53	2,990	1,209	3,616,000	22.9	827,000
1954	3,781	1,280	4,840,000	23.2	1,125,000
1955	4,570	1,279	5,846,000	20.5	1,199,000
1956	3,235	1,050	3,397,000	19.9	676,000
Totals¹.....Av. 1949-53	104,512	1,326	138,564,000	41.8	57,874,000
1954	131,755	1,402	184,763,000	42.1	77,788,000
1955	109,909	1,227	134,840,000	42.8	57,685,000
1956	127,722	1,333	170,278,000	44.6	76,012,000

¹ Includes other types not specified.

Sugar Beets and Beetroot Sugar.—Sugar beets are grown commercially in Quebec, Ontario, Manitoba and Alberta and beet sugar factories are located in these provinces. In Quebec, commercial production centres in the St. Hilaire area of the Eastern Townships, where operations started in 1944. The sugar beet industry of Ontario is largely confined to the southwestern section of the Province and factories are located at Wallaceburg and Chatham.

Processing of sugar beets in Manitoba began in 1940. In Alberta, where the industry has shown steady growth, sugar beets are produced under irrigation with yields averaging above those received in the other provinces.

37.—Acreage, Yield and Value of Sugar Beets and Quantity and Value of Refined Beetroot Sugar Produced 1954-56 with Average for 1949-53

Year	Sugar Beets					Refined Beetroot Sugar Produced		
	Har-vested Area	Yield per Acre	Total Yield	Average Price per Ton	Total Value	Quantity	Value	Price per lb.
	acres	tons	tons	\$	\$	lb.	\$	cts.
Av. 1949-53.....	90,634	10.73	972,649	14.81	14,408,000	263,302,843	25,701,756	9.76
1954 ^r	90,453	11.10	1,003,869	12.06	12,107,000	232,074,736	20,170,474	8.69
1955.....	81,908	11.98	981,014	13.42	13,170,000	274,516,924	23,348,325	8.51
1956.....	78,878	11.32	892,955	14.82 ^p	13,230,000 ^p	246,621,644	21,505,407	8.72

Apiculture.—Honey is produced commercially in all provinces of Canada except Newfoundland, Ontario being the largest producer. There is a considerable movement of honey from the Prairie Provinces to other parts of Canada. In recent years exports have been small, the United States being the most important external market.

Honey statistics have been compiled on an all-Canada basis since 1924 and show that the largest recorded crop was in 1948 when 45,145,000 lb. were produced. Production in 1956 was 24,272,000 lb.

In order to facilitate storage, shipment and uniformity of quality, considerable quantities of Canadian honey are pasteurized. Beekeepers' marketing co-operatives are active in several provinces. Bees are kept in some of the fruit growing and greenhouse districts of the country chiefly for purposes of pollination.

38.—Beekeepers and Bee Colonies, Production and Value of Honey and Beeswax 1954-56 with Average for 1949-53

Year	Bee-keepers	Bee Colonies	Honey				Beeswax		Value of Honey and Wax
			Average Production per Hive	Total Production	Average Price per lb. to Producers	Total Value	Pro-duction	Value	
	No.	No.	lb.	lb.	cts.	\$	lb.	\$	\$
Av. 1949-53	19,370	407,300	78	31,671,000	15	4,741,000	467,000	207,000	4,949,000
1954 ^r	14,890	339,400	58	19,850,000	17	3,418,000	282,000	125,000	3,543,000
1955.....	14,150	323,600	77	25,031,000	18	4,399,000	367,000	178,000	4,577,000
1956.....	14,410	330,000	74	24,272,000	18	4,419,000	355,000	180,000	4,599,000

39.—Honey Production by Province 1954-56 with Average for 1949-53

Province	Av. 1949-53	1954	1955	1956
	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland.....	..	..	..	..
Prince Edward Island.....	68	69	66	92
Nova Scotia.....	118	125	134	161
New Brunswick.....	128	92	86	101
Quebec.....	3,833	3,874	3,717	2,941
Ontario.....	12,567	6,012	7,119	6,372
Manitoba.....	5,013	4,163 ^r	5,057	5,000
Saskatchewan.....	4,046	1,825	3,271	3,348
Alberta.....	4,787	2,636	4,611	4,724
British Columbia.....	1,111	1,054	970	1,533
Totals.....	31,671	19,850^r	25,031	24,272

Maple Sugar and Syrup.—Maple syrup is produced in the Provinces of Nova Scotia, New Brunswick, Quebec and Ontario. The bulk of the crop comes from the Eastern Townships of Quebec, a district famous both in Canada and the United States as the centre of the maple products industry. Virtually all of the maple products exported are sent to the United States with the larger proportion moving as sugar, although substantial quantities of syrup are also shipped.

Much of the syrup sold in Canada is marketed in one gallon cans direct to the consumer from the producer but a considerable amount of both sugar and syrup is sold each year to processing firms.

40.—Estimated Production of Maple Sugar and Maple Syrup by Province 1951-56 with Average for 1949-53

Province and Year	Maple Sugar			Maple Syrup			Total Value, Sugar and Syrup
	Quantity	Average Price per lb.	Value	Quantity	Average Price per gal.	Value	
	lb.	cts.	\$	gal.	\$	\$	\$
Nova Scotia—							
Av. 1949-53 ¹	12,000	50.0	6,000	5,000	4.00	21,000	27,000
1954.....	14,000	56.0	8,000	4,000	4.34	17,000	25,000
1955.....	12,000	57.0	7,000	5,000	4.70	24,000	31,000
1956.....	8,000	65.0	5,000	3,000	5.57	17,000	22,000
New Brunswick—							
Av. 1949-53 ¹	82,000	46.0	38,000	10,000	4.27	41,000	79,000
1954.....	32,000	56.0	18,000	11,000	4.60	51,000	69,000
1955.....	88,000	52.0	46,000	11,000	4.72	52,000	98,000
1956.....	37,000	58.0	21,000	10,000	5.06	51,000	72,000
Quebec—							
Av. 1949-53 ¹	1,626,000	39.0	630,000	2,076,000	3.50	7,267,000	7,897,000
1954.....	1,110,000	44.0	488,000	2,025,000	4.60	9,315,000	9,803,000
1955.....	735,000	52.0	382,000	1,913,000	4.91	9,393,000	9,775,000
1956.....	535,000	43.0	230,000	2,335,000	3.57	8,336,000	8,566,000
Ontario—							
Av. 1949-53 ¹	30,000	43.0	13,000	373,000	4.14	1,544,000	1,557,000
1954.....	19,000	56.0	11,000	264,000	4.28	1,130,000	1,141,000
1955.....	12,000	52.0	6,000	217,000	4.48	972,000	978,000
1956.....	6,000	65.0	4,000	270,000	4.71	1,272,000	1,276,000
Totals—							
Av. 1949-53 ¹	1,749,000	39.2	686,000	2,464,000	3.60	8,873,000	9,560,000
1954.....	1,175,000	44.7	525,000	2,301,000	4.58	10,513,000	11,038,000
1955.....	847,000	52.1	441,000	2,146,000	4.87	10,441,000	10,882,000
1956.....	586,000	44.4	260,000	2,618,000	3.70	9,676,000	9,936,000

¹ Five-year average prices are derived from actual figures but quantities and values are rounded to the nearest thousand.

Fibre Flax.—The demand for fibre flax was heavy during World War II when exports increased to many times the prewar volume. After the War however exports of fibre flax to Canada's principal market, the United Kingdom, dropped sharply and acreage devoted to this crop decreased.

41.—Acreage, Yield and Value of Fibre Flax, Seed and Fibre, 1953-56 with Average for 1948-52

Year	Area	Production		Values		
		Seed	Fibre	Seed	Fibre	Total
	acres	bu.	lb.	\$	\$	\$
Av. 1948-52.....	8,185	38,000	2,145,000	191,000	497,000	688,000
1953.....	3,000	25,000	666,000	68,000	96,000	164,000
1954.....	2,000	7,000	442,000	23,000	76,000	99,000
1955.....	3,000	10,000	520,000	36,000	77,000	113,000
1956.....	3,000	8,000	50,900	19,000	105,000	124,000

Subsection 9.—Prices of Agricultural Produce

The monthly index of farm prices of agricultural products was designed to measure changes occurring in the average prices farmers receive at the farm from the sale of farm products. In comparing current index numbers with those before August 1954 certain points should be considered. Western grain prices used in the construction of the index before Aug. 1, 1954, are final prices for all grains. Since Aug. 1, 1954, only initial prices are available for western wheat and only initial prices plus interim payments for western oats and barley. Any subsequent participation payments made on the 1954 crops will be added to the prices currently used and the index revised upward accordingly.

42.—Average Index Numbers of Farm Prices of Agricultural Products by Province 1945-54 and by Month 1955 and 1956

(1935-39=100)

NOTE.—A description of this index, its coverage and the methods used will be found in *DBS Quarterly Bulletin of Agricultural Statistics* for October-December 1946.

Year and Month	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1945 Averages.....	196.7	180.8	195.3	179.5	174.6	188.4	192.6	196.2	187.8	185.7
1946 Averages.....	194.2	191.2	207.7	196.9	187.9	209.4	217.3	219.9	199.2	204.1
1947 Averages.....	180.1	184.9	199.6	213.7	202.1	225.9	226.1	231.9	207.1	215.8
1948 Averages.....	236.6	214.1	250.3	265.6	258.6	259.6	247.1	262.9	240.2	255.8
1949 Averages.....	204.1	210.5	220.5	261.3	257.8	262.8	248.8	265.6	245.1	255.4
1950 Averages.....	189.6	206.5	216.8	260.9	265.1	274.4	251.5	276.2	244.3	260.8
1951 Averages.....	236.4	243.2	250.8	305.6	315.0	301.6	268.7	308.0	287.1	296.8
1952 Averages.....	351.6	275.1	344.5	290.2	286.2	266.8	245.9	265.3	291.4	274.4
1953 Averages.....	191.5	234.8	213.2	272.1	263.8	245.3	228.7	247.8	265.7	250.4
1954 Averages.....	196.1	230.2	211.8	264.3	252.8	227.5	208.7	232.4	249.6	236.8
1955										
January.....	213.4	225.9	218.9	262.5	246.3	221.0	195.3	219.1	248.7	228.9
February.....	225.8	226.2	221.7	263.4	246.2	223.6	196.8	221.7	246.5	230.1
March.....	223.4	228.3	226.0	263.2	245.4	220.1	195.7	218.0	247.6	228.8
April.....	362.7	255.9	315.6	266.7	253.0	220.8	195.4	220.3	244.4	235.7
May.....	301.0	261.0	291.3	270.4	254.1	223.2	198.4	221.3	250.5	236.7
June.....	243.0	245.2	262.5	270.9	256.1	226.4	199.5	224.2	255.0	237.0
July.....	241.1	233.7	247.4	267.9	256.6	226.3	201.0	225.6	257.4	236.9
August.....	201.2	217.1	201.5	262.7	254.3	230.2	205.5	228.9	254.8	235.7
September.....	169.4	189.1	180.8	259.3	250.4	231.7	215.8	231.7	244.6	235.2
October.....	150.6	186.4	176.4	250.4	244.3	228.9	212.3	224.7	242.5	229.6
November.....	155.8	185.1	186.4	250.2	243.0	227.1	213.4	222.5	245.4	229.1
December.....	159.9	185.5	184.0	252.6	240.8	227.5	213.2	220.9	244.0	228.4
1955 Averages.....	220.6	220.0	226.0	261.7	249.2	225.6	203.5	223.2	248.4	232.7

42.—Average Index Numbers of Farm Prices of Agricultural Products by Province 1945-54 and by Month 1955 and 1956—concluded

Year and Month	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1956										
January.....	168.3	185.0	198.2	252.3	238.8	225.7	211.5	216.9	244.3	226.9
February.....	170.6	189.6	197.0	253.3	237.7	227.4	210.7	218.8	244.1	227.1
March.....	183.9	193.1	209.1	249.4	238.7	227.0	210.8	221.1	242.9	227.8
April.....	230.8	198.2	229.1	250.0	240.0	226.9	211.0	220.6	244.6	229.3
May.....	320.0	213.2	269.1	254.8	242.2	229.5	211.7	224.0	246.1	233.7
June.....	312.2	222.0	289.7	264.0	256.0	232.2	215.5	230.0	250.8	241.8
July.....	424.4	227.0	312.8	269.7	263.1	235.6	216.7	232.5	263.8	247.9
August.....	279.5	209.9	259.6	258.9	259.2	217.6	194.1	213.9	251.6	232.1
September.....	191.4	208.5	208.1	256.8	258.5	216.4	191.8	213.7	259.6	229.3
October.....	189.3	213.3	201.3	258.0	261.1	209.0	184.0	210.4	266.5	227.5
November.....	204.6	212.2	222.4	260.0	259.2	205.5	180.1	204.8	258.8	225.3
December.....	215.0	214.0	223.9	263.8	256.3	206.6	180.0	204.9	258.1	225.1
1956 Averages.....	240.8	207.2	235.0	257.6	250.9	221.6	201.5	217.6	252.6	231.2

Monthly prices of grain and monthly prices of livestock are shown in *DBS Quarterly Bulletin of Agricultural Statistics*.

43.—Yearly Average Cash Prices per Bushel of Canadian Cereals—Basis, in Store at Fort William and Port Arthur, Ont.—Crop Years Ended July 31, 1947-56

NOTE.—Statistics for 1926-46 are given in the corresponding tables of previous editions of the Year Book.

Year Ended July 31—	Averages in Cents and Eighths per Bushel				
	Wheat, ¹ No. 1 N.	Oats, ² No. 2 C.W.	Barley, ² No. 2 C.W. —6 Row	Rye, ³ No. 2 C.W.	Flaxseed, ³ No. 1 C.W.
	cts.	cts.	cts.	cts.	cts.
1947.....	183/3	66/2	93/4	287/6	325 ⁴
1948.....	183/3	90	119/7	374/5	550 ⁵
1949.....	183/3	78/1	124/3	140	403/1 ⁶
1950.....	183/3	90/4	158/7	146	371/6
1951.....	185/6 ^r	95/4	147/4	184/5	441/4
1952.....	183/5 ^r	90/6	132/5	193/5	428/1
1953.....	181/7 ^r	79/7	133/5	158/2	329 ^r
1954.....	156/3	72/7	108/1	99/1	283/6
1955.....	165/1	89/5	123/4	112/2	309/1
1956.....	160/5	82/7	116/5	110/1	360/1

¹ Initial payments plus additional payments to producers. ² Based on cash closing prices, Winnipeg Grain Exchange. From Aug. 1, 1944 to Oct. 22, 1947 prices of oats and barley remained at or near the government-imposed ceiling prices. From Oct. 23, 1947 to July 31, 1949 open market trading again prevailed. Equalization payments to producers are included for the crop years 1944-45 to 1947-48, inclusive. ³ Average cash closing price, Winnipeg Grain Exchange, except where otherwise noted. ⁴ Fixed price to growers. ⁵ \$5 fixed price to growers plus 50 cents participation payment. ⁶ Winnipeg Grain Exchange renewed trading in flaxseed cash and futures on Aug. 16, 1948. The Canadian Wheat Board was authorized to buy all flaxseed offered to it during the 1948-49 crop year on the basis of \$4 per bushel for No. 1 C.W. in store Fort William-Port Arthur, Ont.

44.—Yearly Average Prices per 100 lb. of Canadian Livestock at Principal Markets 1953-56

Item	Toronto				Montreal			
	1953	1954	1955	1956	1953	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$
Steers, up to 1,000 lb., good.....	20.25	19.25	19.60	18.80	20.39	20.10	20.20	18.95
Steers, up to 1,000 lb., medium.....	18.74	17.87	17.56	17.35	18.60	17.67	17.61	17.20
Steers, up to 1,000 lb., common.....	15.53	14.67	13.46	14.09	14.00	14.26	14.25	13.89
Steers, over 1,000 lb., good.....	20.11	19.34	19.60	19.07	20.38	20.12	20.23	19.56
Steers, over 1,000 lb., medium.....	18.55	17.99	17.53	17.37	18.47	18.13	18.04	17.61
Steers, over 1,000 lb., common.....	16.07	15.08	13.61	14.00	14.39	15.14	14.86	14.30
Heifers, good.....	19.82	17.17	17.67	16.88	17.03	16.17	17.10	16.29
Heifers, medium.....	18.17	16.11	15.88	15.67	15.55	13.87	14.37	13.88
Calves, fed, good.....	20.86	19.77	20.13	19.89	20.94	19.81	20.04	19.26
Calves, fed, medium.....	18.95	18.42	18.15	17.84	15.72	17.05	16.99	16.23
Cows, good.....	13.12	12.01	12.60	11.90	13.63	12.12	12.90	12.40
Cows, medium.....	12.27	11.10	11.79	11.12	11.81	10.52	11.27	11.01
Bulls, good.....	13.89	13.10	13.37	13.31	14.46	13.05	13.22	13.42
Stocker and feeder steers, good.....	19.35	18.30	18.75	18.20	20.50	18.00	17.36	1
Stocker and feeder steers, common.....	16.04	15.79	16.30	16.02	17.16	16.50	1	16.00
Stock cows and heifers, good.....	1	1	1	1	16.93	1	1	1
Stock cows and heifers, common.....	11.56	1	1	1	12.00	1	1	1
Calves, veal, good and choice.....	24.62	23.78	23.80	24.40	23.30	21.23	20.70	21.40
Calves, veal, common and medium.....	19.33	18.10	17.83	17.88	19.13	17.28	17.18	16.97
Hogs, Grade B-1, dressed.....	30.40	30.90	25.05	26.50	30.90	31.05	25.30	25.60
Lambs, good.....	23.37	21.60	20.40	22.05	22.73	20.38	19.15	19.55
Lambs, common.....	18.63	17.35	16.93	17.50	17.12	14.94	15.71	15.63
Sheep, good.....	9.52	9.03	8.37	8.62	8.95	9.43	9.75	8.48

Item	Winnipeg				Edmonton			
	1953	1954	1955	1956	1953	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$
Steers, up to 1,000 lb., good.....	18.25	17.45	18.45	17.80	18.42	17.70	17.85	17.00
Steers, up to 1,000 lb., medium.....	16.03	15.12	16.25	15.82	16.69	15.91	16.35	15.54
Steers, up to 1,000 lb., common.....	12.87	11.85	12.57	12.73	12.30	12.44	12.34	11.80
Steers, over 1,000 lb., good.....	18.02	17.35	18.45	18.02	18.14	17.45	17.84	16.85
Steers, over 1,000 lb., medium.....	15.57	15.01	15.98	16.29	16.57	15.85	16.33	15.63
Steers, over 1,000 lb., common.....	12.47	11.85	12.48	13.54	13.18	13.15	14.02	13.33
Heifers, good.....	15.81	14.21	15.82	15.64	16.62	15.02	15.42	14.91
Heifers, medium.....	13.51	11.87	13.55	13.47	14.76	13.45	13.76	12.86
Calves, fed, good.....	18.78	17.52	18.18	17.87	17.99	16.83	17.34	16.58
Calves, fed, medium.....	16.18	15.29	16.21	16.48	16.84	15.60	16.25	15.22
Cows, good.....	11.48	10.64	11.85	10.95	11.26	10.27	11.05	10.05
Cows, medium.....	9.86	9.25	10.02	9.69	9.45	9.11	9.85	9.15
Bulls, good.....	12.30	11.33	11.73	11.01	11.77	11.23	11.40	10.67
Stocker and feeder steers, good.....	15.01	15.15	16.05	16.20	15.54	14.95	15.53	15.10
Stocker and feeder steers, common.....	11.05	10.50	12.39	12.81	11.92	11.70	12.33	12.51
Stock cows and heifers, good.....	12.47	11.60	12.23	11.54	12.50	10.85	11.19	10.86
Stock cows and heifers, common.....	9.17	8.06	9.18	9.35	9.09	7.88	8.43	8.13
Calves, veal, good and choice.....	22.68	21.85	23.30	23.20	22.86	19.90	20.75	18.90
Calves, veal, common and medium.....	15.73	14.65	16.47	16.02	14.87	13.23	13.52	13.31
Hogs, Grade B-1, dressed.....	27.40	27.85	22.05	23.40	28.78	28.05	22.20	23.40
Lambs, good.....	19.85	18.45	17.60	18.25	20.19	18.95	17.70	18.25
Lambs, common.....	15.27	13.75	14.17	13.74	17.13	15.67	16.00	15.81
Sheep, good.....	5.32	4.63	4.56	4.65	9.41	9.43	8.28	8.07

1 No sales reported.

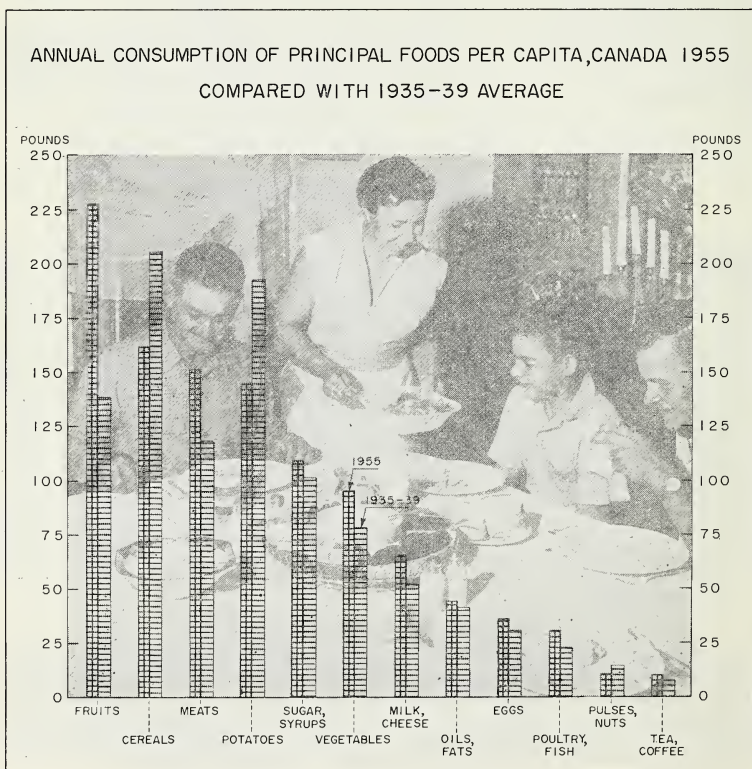
Subsection 10.—Food Consumption

Consumption of Major Foods.—A study of consumption of the major foods was undertaken during World War II by the Dominion Bureau of Statistics in recognition of the national and international significance of such information. Though data on total consumption of certain commodities such as wheat, alcoholic beverages, meats, etc., have been available for a considerable period, it was found necessary to establish a per capita level of consumption of a wide range of products on a comparable basis.

The figures represent available supplies, including production and imports, adjusted for change of stocks, exports, marketing losses and industrial uses. All calculations have been made at the retail stage of distribution, except for meats where the figures are worked out at the wholesale stage. The amount of food actually eaten would be somewhat lower than indicated because of losses and waste occurring after the products reached the hands of the consumer. It should also be pointed out that there are minor inaccuracies in certain of the figures since statistics of storage stocks in the hands of retailers and consumers were not available.

All basic foods have been classified under 13 main commodity groups. Totals for each group have been computed using common denominators for the group, for example: milk solids (dry weight) in the dairy products group; fat content for fats and oils; and fresh equivalent for fruits. All foods have been included in their basic form, that is, as flour, fat, sugar, etc., rather than in more highly manufactured forms.

The series in Table 45 represents the official estimates of yearly supplies of food moving into consumption, expressed in pounds per capita, for the years 1935-39 as an average for comparison with the years 1954, 1955 and 1956.



45.—Per Capita Supplies of Food Moving into Consumption 1954-56 with Average for 1935-39

Kind of Food and Weight Base	Pounds per Capita per Annum				Percentages of 1935-39 Average		
	Average 1935-39	1954*	1955	1956	1954*	1955	1956
Cereals.....Retail wt.	205.7	166.1	161.0	163.3	80.7	78.3	79.4
Flour (including rye flour) ¹"	184.8	147.6	144.3	145.1	79.9	78.1	78.5
Oatmeal and rolled oats....."	7.3	5.7	4.8	5.4	78.1	65.8	74.0
Pot and pearl barley....."	0.3	0.3	0.2	0.2	100.0	66.7	66.7
Corn meal and flour....."	1.4	0.5	0.7	0.8	35.7	50.0	57.1
Buckwheat flour....."	0.2	0.1	0.1	0.1	50.0	50.0	50.0
Rice....."	4.3	4.7	4.5	5.1	109.3	104.7	118.6
Breakfast food....."	7.4	7.2	6.4	6.7	97.3	86.5	90.5
Potatoes.....Retail wt.	192.9	146.9	149.1	147.3	76.2	77.3	76.4
Potatoes, white....."	192.3	146.3	148.5	146.7	76.1	77.2	76.3
Potatoes, sweet....."	0.6	0.6	0.6	0.6	100.0	100.0	100.0
Sugars and Syrups.....Sugar content	101.7	102.2	109.9	106.7	100.5	108.1	104.9
Sugar.....Refined wt.	94.7	96.3	99.0	99.4	101.7	104.5	105.0
Maple sugar.....Retail wt.	1.8	0.9	0.8	0.9	50.0	44.4	50.0
Other....."	8.2	7.9	15.7	10.4	96.3	191.5	126.8
Starch.....Retail wt.	2.5	1.6	1.6	1.6	64.0	64.0	64.0
Pulses and Nuts.....Retail wt.	14.5	9.8	10.5	10.6	67.6	72.4	73.1
Dry beans....."	3.7	3.0 ²	4.0 ²	4.1 ²	81.1	108.1	110.8
Dry peas....."	5.7	1.0	0.9	0.8	17.5	15.8	14.0
Peanuts.....Shelled wt.	2.2	2.9	3.1	3.2	131.8	140.9	145.5
Tree nuts....."	1.1	1.4	1.1	1.2	127.3	100.0	109.1
Cocoa.....Green beans	3.7	3.2	3.0	2.8	86.5	81.1	75.7
Fruit.....Fresh equiv.	138.7	215.0	226.7	229.6	155.0	144.7	165.5
Tomatoes and Citrus Fruit—							
Tomatoes, fresh.....Retail wt.	15.4	19.5	19.0	18.5	126.6	123.4	120.1
Tomato products.....Net wt. canned	10.0	17.9	16.3	17.3	179.0	163.0	173.0
Citrus fruit, fresh.....Retail wt.	25.1	38.5	36.9	36.1	153.4	147.0	143.8
Citrus fruit, canned.....Net wt. canned	0.5	10.8	13.6	14.6	216.0	272.0	292.0
Other fruit—							
Fresh.....Retail wt.	40.5	59.0	70.7	71.3	145.7	174.6	176.0
Canned.....Net wt. canned	6.3	15.4	14.9	16.0	244.4	236.5	254.0
Dried.....Processed wt.	8.3	6.0	7.1	5.5	72.3	85.5	66.3
Juice.....Net wt. canned	..	4.4	4.5	5.1	..	..	..
Frozen.....Retail wt.	0.2	1.2	1.2	1.4	600.0	600.0	700.0
Vegetables.....Fresh equiv.	78.4	94.5	94.5	96.9	120.5	120.5	123.6
Fresh—							
Cabbage and greens.....Retail wt.	16.2	19.9	18.6	19.6	122.8	114.8	121.0
Carrots....."	15.4	11.4	11.6	12.0	74.0	75.3	77.9
Legumes....."	6.2	2.8	3.4	3.7	45.2	54.8	59.7
Other....."	29.8	37.3	36.9	37.2	125.2	123.8	124.8
Canned.....Net wt. canned	10.8	18.8	19.3	19.0	174.1	178.7	175.9
Frozen.....Retail wt.	..	1.4	1.7	1.9	..	..	..
Oils and Fats.....Fat content.	41.4	44.6	44.3	44.5	107.7	107.0	107.5
Margarine.....Retail wt.	..	7.6	8.1	7.7	..	..	..
Lard....."	3.9	8.3	8.7	8.8	212.8	223.1	225.6
Shortening....."	10.6	10.2	9.7	9.7	96.2	91.5	91.5
Salad and cooking oil....."	1.8	2.9	2.4	2.7	161.1	133.3	150.0
Butter....."	31.0	20.7	20.6	20.8	66.8	66.5	67.1
Eggs.....Fresh Egg equiv.	39.7	36.6³	36.0³	36.9³	119.2	117.3	120.2
Meat.....Carcass wt..	118.1	148.1	151.4	154.1	125.4	128.2	130.5
Pork....."	39.8	53.7	57.9	58.3	134.9	145.5	146.5
Beef....."	54.7	72.1	71.9	73.6	131.8	131.4	134.6
Veal....."	10.5	10.1	8.8	8.9	96.2	83.8	84.8
Mutton and lamb....."	5.6	2.5	2.8	2.7	44.6	50.0	48.2
Offal.....Edible wt.	5.8	5.3	5.8	5.7	91.4	100.0	98.3
Canned meat.....Net wt. canned	1.4	4.5	4.5	5.3	321.4	321.4	378.6

For footnotes, see end of table, p. 452.

45.—Per Capita Supplies of Food Moving into Consumption 1954-56 with Average for 1935-39—concluded

Kind of Food and Weight Base	Pounds per Capita per Annum				Percentages of 1935-39 Average		
	Average 1935-39	1954 ^a	1955	1956	1954 ^a	1955	1956
Poultry and Fish..... Edible wt.	23.4	30.0	30.7	31.6	133.9	137.1	141.1
Hens and chickens..... Retail wt. dressed	15.6	22.6 ²	23.5 ²	24.4 ³	144.9	150.6	156.4
Other poultry..... " "	2.8	6.1 ³	6.2 ³	7.2 ³	217.9	221.4	257.1
Fish and shellfish, fresh and frozen.... Edible wt.	4	7.1	7.3	7.2	4	4	4
Fish, cured (smoked, salted, pickled). " "	4	1.9	1.8	1.7	4	4	4
Fish and shellfish, canned..... Net wt. canned	2.7	4.5	4.5	4.5	166.7	166.7	166.7
Milk and Cheese..... Milk solids	52.0	64.2	65.9	66.3	123.5	126.7	127.5
Cheddar cheese..... Retail wt.	3.7	5.5	5.8	5.3	148.6	156.8	143.2
Other cheese..... " "	0.2	0.9	0.9	1.1	450.0	450.0	550.0
Cottage cheese..... " "	0.2	0.8	0.9	1.1	400.0	450.0	550.0
Evaporated whole milk..... " "	6.1	18.2	18.5	18.6	298.4	303.3	304.9
Condensed whole milk..... " "	0.6	0.8	0.8	0.9	133.3	133.3	150.0
Whole milk powder..... " "	0.1	0.3	0.2	0.3	300.0	200.0	300.0
Condensed skim milk..... " "	0.4	0.3	0.3	0.2	75.0	75.0	50.0
Skim milk powder..... " "	1.8	4.7	5.2	5.1	261.1	288.9	283.3
Evaporated skim milk..... " "	0.1	0.8	0.6	0.5	800.0	600.0	500.0
Condensed buttermilk..... " "	0.1	0.1	0.1	0.1	100.0	100.0	100.0
Milk in ice cream..... " "	10.9	32.0	35.3	35.1	293.6	323.9	322.0
Powdered buttermilk..... " "	0.2	0.4	0.4	0.5	200.0	200.0	250.0
Fluid whole milk ⁴ " "	408.5	405.2 ²	411.0 ²	415.1 ³	99.2	100.6	101.6
Beverages..... Primary distribution wt.	7.2	9.6	10.1	10.9	133.3	140.3	151.4
Tea..... " "	3.5	2.9	2.7	2.8	82.9	77.1	80.0
Coffee..... Green beans	3.7	6.7	7.4	8.1	181.1	200.0	218.9

¹ Fluctuations in apparent per capita flour consumption are partly caused by unavailability of complete data on flour inventories in all positions. ² Includes soybean flour. ³ Exclusive of Newfoundland.

⁴ Breakdown according to current classification not available. ⁵ Includes process cheese. ⁶ Includes cream expressed as milk.

Disappearance of Meats and Lard.—Production of meats from slaughter in Canada, total supply, distribution and per capita consumption of meats and lard are shown in Table 46. All estimates are on a carcass weight basis except canned meats which are in terms of product.

46.—Supply, Distribution and Consumption of Meats and Lard 1952-56 with Average for 1946-50

NOTE.—Figures for 1952-56 are subject to revision.

Item	Average 1946-50	1952	1953	1954 ^a	1955	1956
Beef—						
Animals slaughtered in Canada..... '000	1,923.3	1,558.5	1,985.8	2,268.1	2,345.7	2,494.6
Estimated dressed weight..... '000 lb.	908,487	783,148	984,799	1,101,031	1,139,078	1,208,384
On hand, Jan. 1..... " "	34,650	19,497	32,961	33,103	23,648	29,682
Imports..... " "	3,554	9,289	11,537	18,521	20,098	18,266
Totals, Supply..... " "	947,691	811,934	1,029,297	1,152,655	1,182,824	1,256,332
Exports..... " "	101,672	68,072	28,920	22,580	12,787	18,874
Used for canning..... " "	39,108	9,199	9,651	11,625	18,197	20,713
On hand, Dec. 31..... " "	30,916	32,961	35,756	23,648	29,682	33,155
TOTALS, CONSUMPTION..... " "	775,995	701,702	954,970	1,094,802	1,122,158	1,183,590
CONSUMPTION PER CAPITA..... lb.	60.0	48.6	64.6	72.1	71.9	73.6

**46.—Supply, Distribution and Consumption of Meats and Lard 1952-56 with
Average for 1946-50—continued**

Item	Average 1946-50	1952	1953	1954 ^r	1955	1956
Veal—						
Animals slaughtered in Canada..... '000	1,310.1	859.8	1,173.0	1,465.0	1,342.9	1,388.4
Estimated dressed weight..... '000 lb.	132,957	89,306	124,575	153,816	139,548	145,643
On hand, Jan. 1..... "	5,726	4,171	3,891	5,199	3,700	4,662
Imports..... "	1	1	1	1	1	1
Totals, Supply..... "	138,683	93,477	128,466	159,015	143,248	150,305
Exports..... "	1	1	1	1	1	1
Used for canning..... "	2,608	1,736	1,454	1,366	1,297	1,483
On hand, Dec. 31..... "	5,328	3,891	5,520	3,700	4,662	5,698
TOTALS, CONSUMPTION..... "	130,747	87,850	121,492	153,949	137,289	143,124
CONSUMPTION PER CAPITA..... lb.	10.1	6.1	8.2	10.1	8.8	8.9
Mutton and Lamb—						
Animals slaughtered in Canada..... '000	1,077.7	595.9	673.3	728.6	808.1	786.5
Estimated dressed weight..... '000 lb.	47,640	26,318	29,909	31,015	34,167	33,348
On hand, Jan. 1..... "	7,074	3,584	4,482	3,359	2,901	4,816
Imports..... "	103	2,661	4,745	7,324	10,829	9,546
Totals, Supply..... "	54,817	32,563	39,136	41,698	47,897	47,710
Exports..... "	5,522	46	52	53	273	45
Used for canning..... "	508	350	310	301	330	628
On hand, Dec. 31..... "	6,297	4,482	3,533	2,901	4,816	2,916
TOTALS, CONSUMPTION..... "	42,490	27,685	35,241	38,443	42,478	44,121
CONSUMPTION PER CAPITA..... lb.	3.3	1.9	2.4	2.5	2.7	2.7
Pork—						
Animals slaughtered in Canada..... '000	6,840.4	8,864.1	6,892.6	7,082.2	7,950.6	7,995.1
Estimated dressed weight..... '000 lb.	890,307	1,143,331	885,488	917,171	1,019,121	1,028,170
On hand, Jan. 1..... "	39,449	39,000	68,813	28,731	32,280	34,965
Imports..... "	3,891	4,677	481	1,525	167	154
Totals, Supply..... "	933,647	1,187,008	954,782	947,427	1,051,568	1,063,289
Exports..... "	188,310	15,041	55,320	60,607	64,109	55,408
Used for canning..... "	46,628	190,911	55,935	39,093	48,844	50,574
On hand, Dec. 31..... "	39,093	68,813	30,752	32,280	34,965	20,549
TOTALS, CONSUMPTION..... "	659,616	912,243	812,775	815,447	903,650	936,758
CONSUMPTION PER CAPITA..... lb.	51.0	63.2	55.0	53.7	57.9	58.3
Canned Meats—						
Estimated production..... '000 lb.	89,749	144,183	56,249	57,450	75,606	81,401
On hand, Jan. 1..... "	15,362	20,676	75,118	36,102	15,165	20,775
Imports..... "	4,314	14,185	11,543	15,978	15,629	13,662
Totals, Supply..... "	109,425	179,044	142,910	109,530	106,400	115,838
Exports..... "	56,589	14,874	46,743	26,226	14,919	11,442
On hand, Dec. 31..... "	8,807	75,118	36,102	15,165	20,775	18,764
TOTALS, CONSUMPTION..... "	44,029	89,052	60,065	68,139	70,706	85,632
CONSUMPTION PER CAPITA..... lb.	3.4	6.2	4.1	4.5	4.5	5.3
Offal—						
Estimated production..... '000 lb.	81,218	81,209	81,468	89,447	94,973	98,552
On hand, Jan. 1..... "	2	2	2	5,169	5,348	5,042
Imports..... "	973	1,594	4,121	3,769	3,793	2,360
Totals, Supply..... "	82,191	82,803	85,589	98,385	104,114	105,954
Exports..... "	5,834	2,535	6,680	8,954	7,112	6,831
Used for canning..... "	9,631	2,493	3,509	3,871	2,099	2,285
On hand, Dec. 31..... "	2	2	2	5,348	5,042	5,145
TOTALS, CONSUMPTION..... "	66,726	77,775	75,400	80,212	89,861	91,693
CONSUMPTION PER CAPITA..... lb.	5.2	5.4	3.1	5.3	5.8	5.7

For footnotes, see end of table, p. 454.

**46.—Supply, Distribution and Consumption of Meats and Lard 1952-56 with
Average for 1946-50—concluded**

Item	Average 1946-50	1952	1953	1954 ¹	1955	1956
Lard—³						
Estimated production..... '000 lb.	113,756	186,972	139,323	137,931	152,779	155,148
On hand, Jan. 1..... "	2,620	6,000	12,352	4,916	5,490	5,707
Imports..... "	9,358	1,265	6,790	2,850	6,195	15,301
Totals, Supply..... "	125,734	194,237	158,465	145,697	164,464	176,156
Exports..... "	430	14,289	1,426	676	1,312	320
On hand, Dec. 31..... "	3,103	8,404	4,916	5,490	5,707	4,853
TOTALS, CONSUMPTION..... "	122,201	171,544	152,123	139,531	157,445	170,983
CONSUMPTION PER CAPITA..... lb.	9.4	11.9	10.3	9.2	10.1	10.6

¹ Included with beef.² Not available; assume no change in stocks between beginning and end of period.³ Includes commercial lard production and estimated lard equivalent of renderable pork fat available from all uninspected slaughter.

Section 5.—Agricultural Statistics of the Census*

Census of Agriculture statistics relating to farms, farm mechanization, electrification and area are included in this Section. No comparable data are available for Newfoundland for years previous to the 1951 Census.

For census purposes a farm is defined as a holding on which agricultural operations are carried out and which is three acres or more in size, or from one to three acres in size, and with an agricultural production in 1955 valued at \$250 or more. The holding may consist of a single tract of land or of a number of separate tracts held under the same or different tenures, and operated as a single unit. Where the farm was made up of several parts located in different municipalities, the 1956 Census reported the complete farm as one unit in the municipality where the headquarters was located. The same definition was used in the 1951 Census.

Number of Farms.—The number of farms in Canada at June 1, 1956, was 575,015, a decrease of 48,076 from the 623,091 farms recorded in the 1951 Census. As compared with 1951, all the provinces showed decreases in number of farms ranging from 5.8 p.c. in Alberta to 34.2 p.c. in Newfoundland. Decreases in the Atlantic Provinces, except Prince Edward Island, and in Quebec were above the national average of 7.7 p.c., while decreases in Prince Edward Island, Ontario and the Western Provinces were below it.

* Prepared in the Agriculture Section of the Census Division, Dominion Bureau of Statistics.

47.—Number of Farms by Province, Censuses of 1951 and 1956

Province or Territory	1951	1956	Percentage Change 1951-56
	No.	No.	
Newfoundland.....	3,626	2,387	— 34.2
Prince Edward Island.....	10,137	9,432	— 7.0
Nova Scotia.....	23,515	21,075	— 10.4
New Brunswick.....	26,431	22,116	— 16.3
Quebec.....	134,336	122,617	— 8.7
Ontario.....	149,920	140,602	— 6.2
Manitoba.....	52,383	49,201	— 6.1
Saskatchewan.....	112,018	103,391	— 7.7
Alberta.....	84,315	79,424	— 5.8
British Columbia.....	26,406	24,748	— 6.3
Yukon and Northwest Territories.....	4	22	+450.0
Canada.....	623,091	575,015	— 7.7

Farms Classified by Tenure.—The proportion of farms operated by the owner in Canada declined fractionally from 78.5 p.c. in 1951 to 78.0 p.c. in 1956. Decreases in the proportion of owner-operated farms in Prince Edward Island, Nova Scotia, Manitoba, Saskatchewan and Alberta more than offset increases in Newfoundland, Quebec, Ontario and British Columbia, while the proportion in New Brunswick remained unchanged.

The proportion of tenant-operated farms was lower in 1956 than in 1951 in each of the provinces except Prince Edward Island, the national average of 6.2 p.c. being lower than the 1951 average of 7.2 p.c. Saskatchewan had the highest proportion of tenant-operated farms with 13.0 p.c., followed by Alberta with 10.7 p.c. Newfoundland with 0.7 p.c., and Prince Edward Island, New Brunswick and Quebec with 1.0 p.c. had the lowest proportions.

48.—Tenure of Farms by Province, Censuses of 1951 and 1956

Tenure and Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	
	No.	No.	No.	No.	No.	
Owner (including manager).....1951	3,283	9,510	22,209	25,189	127,979	
1956	2,245	8,621	19,859	21,077	117,458	
Tenant.....1951	60	82	291	316	2,566	
1956	17	97	241	229	1,269	
Part owner, part tenant.....1951	283	545	1,015	926	3,791	
1956	125	714	975	810	3,890	
Totals, Farms.....1951	3,626	10,137	23,515	26,431	134,336	
1956	2,387	9,432	21,075	22,116	122,617	
	Ont.	Man.	Sask.	Alta.	B.C.	Canada ¹
	No.	No.	No.	No.	No.	No.
Owner (including manager).....1951	125,159	37,541	61,763	53,482	22,763	488,882
1956	119,450	34,357	54,881	49,054	21,713	448,730
Tenant.....1951	8,852	5,062	16,495	9,735	1,524	44,983
1956	6,368	4,325	13,476	8,484	1,010	35,521
Part owner, part tenant.....1951	15,909	9,780	33,760	21,098	2,119	89,226
1956	14,784	10,519	35,034	21,886	2,025	90,764
Totals, Farms.....1951	149,920	52,383	112,018	84,315	26,406	623,091
1956	140,602	49,201	103,391	79,424	24,748	575,015

¹ Includes the Yukon and Northwest Territories.

49.—Condition and Tenure of Occupied Farm Land by Province, Censuses of 1951 and 1956

Item	Newfoundland		P. E. Island		Nova Scotia		New Brunswick	
	1951	1956	1951	1956	1951	1956	1951	1956
	acres	acres	acres	acres	acres	acres	acres	acres
Condition—								
Under crops.....	20,271	15,968	426,210	419,099	477,459	416,235	711,647	617,279
Pasture (improved).....	5,885	5,739	197,937	201,225	155,108	161,424	243,872	252,686
Summer fallow.....	..	92	1,806	2,463	2,524	2,649	6,927	13,560
Other.....	2,825	2,435	19,842	22,705	26,884	49,566	43,931	67,766
Totals, Improved Land..	28,981	24,234	645,795	645,492	661,975	629,874	1,006,377	951,291
Woodland.....	37,394	26,919	346,191	334,226	1,845,648	1,566,071	2,044,103	1,703,702
Other.....	18,665	20,661	103,318	85,745	666,068	579,697	419,754	326,456
Totals, Unimproved Land.....	56,059	47,580	449,509	419,971	2,511,716	2,145,768	2,463,857	2,030,158
Tenure—								
Operated by owner ¹	79,770	69,573	1,068,013	1,031,968	3,101,578	2,711,619	3,371,867	2,910,864
Operated by tenant.....	5,270	2,241	27,291	33,495	72,113	64,023	98,367	70,585
Totals, Farm Area.....	85,040	71,814	1,095,304	1,065,463	3,173,691	2,775,642	3,470,234	2,981,449

¹ Includes area operated by manager.

49.—Condition and Tenure of Occupied Farm Land by Province, Censuses of 1951 and 1956— concluded

Item	Quebec		Ontario		Manitoba		Saskatchewan	
	1951	1956	1951	1956	1951	1956	1951	1956
	acres	acres	acres	acres	acres	acres	acres	acres
Condition—								
Under crops.....	5,790,359	5,549,524	8,645,302	8,219,407	7,335,184	7,686,013	23,705,575	24,480,501
Pasture (improved).....	2,685,217	2,642,764	3,235,345	3,470,688	584,722	594,902	1,441,015	1,128,001
Summer fallow.....	47,084	67,082	333,764	333,973	2,519,264	2,827,551	12,855,394	14,193,468
Other.....	306,308	370,465	478,839	548,089	322,640	345,317	804,786	704,030
Totals, Improved Land..	8,828,968	8,629,835	12,693,250	12,572,157	10,761,810	11,453,783	38,806,770	40,506,000
Woodland.....	5,874,341	4,877,803	3,852,774	3,338,870	1,812,209	1,566,494	2,945,167	2,379,043
Other.....	2,083,096	2,402,490	4,334,030	3,968,619	5,156,374	4,911,540	19,911,258	19,908,936
Totals, Unimproved Land.....	7,957,437	7,280,293	8,186,804	7,307,489	6,968,583	6,478,034	22,856,425	22,287,979
Tenure—								
Operated by owner ¹	16,261,924	15,515,261	18,632,732	17,982,565	13,788,328	13,818,460	40,363,086	41,408,721
Operated by tenant.....	524,481	394,867	2,247,322	1,897,081	3,942,065	4,113,357	21,300,109	21,385,258
Totals, Farm Area.....	16,786,405	15,910,128	20,880,054	19,879,646	17,730,393	17,931,817	61,663,195	62,793,979
	Alberta		British Columbia		Totals*			
	1951	1956	1951	1956	1951	1956		
	acres	acres	acres	acres	acres	acres		
Condition—								
Under crops.....	14,427,631	14,850,171	672,448	689,749	62,212,148	62,944,176		
Pasture (improved).....	1,112,825	1,279,894	343,195	320,251	10,005,126	10,057,819		
Summer fallow.....	6,194,976	7,091,264	70,318	87,479	22,032,062	24,619,625		
Other.....	535,612	524,784	61,815	69,273	2,603,490	2,704,623		
Totals, Improved Land..	22,271,044	23,746,113	1,147,776	1,166,752	96,852,826	100,326,243		
Woodland.....	2,865,568	2,891,128	1,156,549	855,398	22,779,944	19,540,541		
Other.....	19,323,020	19,333,154	2,397,949	2,516,731	54,413,884	54,056,907		
Totals, Unimproved Land.....	22,188,588	22,224,282	3,554,498	3,372,129	77,193,828	73,597,448		
Tenure—								
Operated by owner ¹	29,301,589	29,707,927	3,714,231	3,635,268	129,683,550	128,795,179		
Operated by tenant.....	15,158,043	16,262,468	988,043	903,613	44,363,104	45,128,512		
Totals, Farm Area.....	44,459,632	45,970,395	4,702,274	4,538,881	174,046,654	173,923,691		

¹ Includes area operated by manager.² Includes the Yukon and Northwest Territories.

Farms Classified by Size of Holding.—Although in 1956 only 3.7 p.c. of the farms in Canada were less than 10 acres in size, 48.2 p.c. in Newfoundland and 25.7 p.c. in British Columbia were in this size group. Only 2.5 p.c. of the total farms in the other provinces were under 10 acres in size. The largest percentage of farms in the Maritime Provinces, Quebec and Ontario were in the 70-to-239-acre size group, while in Manitoba, Saskatchewan and Alberta the 240-to-399-acre size group contained the largest percentage of farms. In British Columbia it was the 10-to-69-acre size group and in Newfoundland the 3-to-9-acre size group that had the largest proportions of farms.

Farms in Canada were generally larger in 1956 than in 1951. The average size of farm increased from 279.3 acres in 1951 to 302.5 acres in 1956. The number of farms 400 acres or more in size increased nearly 4 p.c., while the number of farms under 400 acres in size decreased over 10 p.c. In Canada, 21.4 p.c. of the farms were 400 acres or more in size, but it was only in the Prairie Provinces that these large farms formed a significant proportion of the total—in Saskatchewan 58.7 p.c., in Alberta 43.3 p.c., and in Manitoba 33.7 p.c. In the other provinces the proportion of farms with 400 or more acres ranged from less than 1 p.c. in Newfoundland and Prince Edward Island to 8.2 p.c. in British Columbia.

50.—Farm Holdings classified by Size of Farm, by Province, Census 1956

Size of Farm	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.
	No.	No.	No.	No.	No.	No.
Under 3 acres.....	77	9	78	62	196	688
3 — 9 acres.....	1,073	217	1,255	861	1,976	5,988
10 — 69 ".....	986	2,372	5,870	5,530	18,897	24,997
70 — 239 ".....	225	6,312	11,002	12,718	89,131	90,133
240 — 399 ".....	19	433	2,001	2,058	10,042	13,882
400 — 559 ".....	2	70	580	590	1,826	3,318
560 — 759 ".....	2	13	181	172	385	1,012
760 — 1,119 ".....	2	5	83	95	123	431
1,120 — 1,599 ".....	—	1	17	24	24	112
1,600 acres or over.....	1	—	8	6	17	41
Totals, Farms.....	2,387	9,432	21,075	22,116	122,617	140,602
	Man.	Sask.	Alta.	B.C.	Canada ¹	
	No.	No.	No.	No.	No.	
Under 3 acres.....	114	45	78	705	2,052	
3 — 9 acres.....	1,052	442	884	5,664	19,415	
10 — 69 ".....	2,900	1,208	2,073	10,573	75,409	
70 — 239 ".....	13,803	14,549	19,559	4,357	261,799	
240 — 399 ".....	14,755	26,496	22,438	1,424	93,551	
400 — 559 ".....	7,860	19,996	12,069	686	46,997	
560 — 759 ".....	4,815	16,553	8,228	462	31,825	
760 — 1,119 ".....	2,753	14,191	6,877	397	24,958	
1,120 — 1,599 ".....	823	6,364	3,551	188	11,104	
1,600 acres or over.....	326	3,547	3,667	292	7,905	
Totals, Farms.....	49,201	103,391	79,424	24,748	575,015	

¹ Includes the Yukon and Northwest Territories.

Economic Classification of Farms.—The Economics Division, Department of Agriculture, developed a classification of farms for the 1956 Census based on the productive capacity of farms as reflected in the inventory data shown by the Census. This classification differs from the 1951 Census economic classification of farms, which was based on income data as reported by the farm operators, and is not comparable.

For the 1956 Census, three classes of farms were delineated:—

COMMERCIAL CROP AND LIVESTOCK FARMS.—Farms having a potential production of \$1,200 or more (based on average production and price series) are classified as commercial crop and livestock farms. Commercial farms thus defined delineate that segment of the total number of farms on which the operators devoted most of their time to farming with a view to selling on the market. The selection of the \$1,200 benchmark is an arbitrary one but is believed to represent the lower limit of those farms which provide substantial employment to the operator. While an income of \$1,200 is clearly below desirable living standards it does represent a farm unit which has passed the subsistence stage.

INSTITUTIONAL FARMS, ETC.—This classification includes Indian reserve farms, experimental farms, community pastures, Hutterite colonies, and farms operated by penitentiaries, hospitals, etc.

OTHER FARMS.—This is a miscellaneous category including not only those units producing crops and livestock worth less than \$1,200 but also acreages devoted to greenhouses, nurseries, apiaries, forest products, fur production and goats.

Of the total farms in Canada, 454,078 or 79.0 p.c. were classified as commercial crop and livestock farms, the percentage ranging from 21.8 in Newfoundland to 95.6 in Saskatchewan.

51.—Farms classified by Economic Class, by Province, 1956

Province	Commercial Crop and Livestock Farms		Institutional Farms, etc.		Other Farms		All Farms
	No.	P.C. of Total	No.	P.C. of Total	No.	P.C. of Total	No.
Newfoundland.....	520	21.8	10	0.4	1,857	77.8	2,387
Prince Edward Island.....	6,958	73.8	6	0.1	2,468	26.1	9,432
Nova Scotia.....	8,107	38.5	23	0.1	12,945	61.4	21,075
New Brunswick.....	9,021	40.8	24	0.1	13,071	59.1	22,116
Quebec.....	88,197	72.0	179	0.1	34,241	27.9	122,617
Ontario.....	113,704	80.9	112	0.1	26,786	19.0	140,602
Manitoba.....	43,593	88.6	53	0.1	5,555	11.3	49,201
Saskatchewan.....	98,778	95.6	126	0.1	4,487	4.3	103,391
Alberta.....	71,969	90.7	118	0.1	7,337	9.2	79,424
British Columbia.....	13,226	53.4	40	0.2	11,482	46.4	24,748
Canada¹.....	454,078	79.0	695	0.1	120,242	20.9	575,015

¹ Includes the Yukon and Northwest Territories.

Farm Areas.—The total area of occupied farm land in Canada was 0.1 p.c. less in 1956 than in 1951. Decreases in the Atlantic Provinces, Ontario, Quebec and British Columbia were slightly greater than increases in the Prairie Provinces.

The area of improved land increased by 3.6 p.c. in the five-year period, entirely accounted for by increases in the Prairie Provinces and British Columbia. Similarly, the increase of 1.2 p.c. in the total area under crops for Canada as a whole also took place in the Prairie Provinces and British Columbia.

The total area of owner-operated farm land decreased by 0.7 p.c. in 1956 as compared with 1951. Decreases in Eastern Canada and British Columbia more than offset increases in the Prairie Provinces. The largest percentage decrease in farm land owned by the operator was in New Brunswick with 13.7 p.c., followed closely by Newfoundland with 12.8 p.c., and Nova Scotia with 12.6 p.c. Saskatchewan recorded the largest increase (2.6 p.c.) in farm area owner-operated, with Alberta and Manitoba following.

The increase for Canada in the area rented by farm operators, which amounted to 1.7 p.c. during the 1951-56 period, was contributed by the Prairie Provinces and Prince Edward Island. Decreases in farm land rented ranged from 8.5 p.c. in British Columbia to 28.2 p.c. in New Brunswick and 57.5 p.c. in Newfoundland.

Farm Machinery.—The upward trend in the number of machines on farms in Canada continued through the 1951-56 period. For Canada as a whole, all types of machines included in the 1956 Census showed an increase in number and in farms reporting them.

Grain combines showed the greatest percentage increase, 51.3 p.c. more combines being reported on farms in 1956 than in 1951. Farmers in Prince Edward Island reported 13 times as many, in Nova Scotia five and a half times as many, in Quebec three and a half times as many, and in New Brunswick almost three times as many. Increases in Ontario, Manitoba, Saskatchewan, Alberta and British Columbia were close to the national average of 51.3 p.c. and ranged from 40.3 p.c. in Manitoba to 65.9 p.c. in Ontario. Saskatchewan showed the largest numerical increase of 18,864 combines, and together with Alberta contributed two-thirds of the total 1951-56 increase of 46,427 combines for Canada. The total number of farms reporting combines increased 50.5 p.c. to 130,384 farms. Close to 50 p.c. of the farms in the Prairie Provinces reported combines.

There has also been a considerable increase during the period in the number of motor trucks on farms in all provinces, the increases ranging from 17.3 p.c. in New Brunswick to 93.4 p.c. in Prince Edward Island. Prince Edward Island, Newfoundland, Quebec, Saskatchewan and Alberta reported increases above the national average of 41.3 p.c. The largest numerical increase was reported in Saskatchewan.

The number of automobiles on farms in Canada increased 6.8 p.c. during the period 1951-56, exceeding the 4.5 p.c. increase during the 1941-51 period. All provinces contributed, provincial increases ranging from 1.7 p.c. in Manitoba to 44.9 p.c. in Newfoundland; 330,436 Canadian farms or 57.5 p.c. of all farms reported at least one automobile. Ontario where 75.1 p.c. of the farms reported automobiles and Manitoba where 63.6 p.c. reported automobiles led the provinces in this respect.

Canadian farms reported 25 p.c. more tractors in 1956 than in 1951 and all provinces shared in the increase. Newfoundland had the largest percentage increase with 134.9 p.c. followed by Prince Edward Island with 74.4 p.c. Saskatchewan reported the lowest percentage increase of 13.8 p.c. More than two out of three farms in Canada reported one or more tractors in 1956.

The national average increase between 1951 and 1956 in the number of gasoline engines reported on farms was 36.5 p.c. Six provinces, Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia reported increases, with Saskatchewan's advance of 80.6 p.c. contributing two-thirds of the total increase. Decreases in four provinces ranged from 7.7 p.c. in Prince Edward Island and 30.0 p.c. in Quebec to 39.0 p.c. in Newfoundland and 39.4 p.c. in New Brunswick.

52.—Farm Machinery by Province, Censuses of 1931, 1941, 1951 and 1956

Province and Year	Automobiles		Tractors		Motor Trucks		Gasoline Engines		Grain Combines	
	No.	Farms Re-reporting	No.	Farms Re-reporting	No.	Farms Re-reporting	No.	Farms Re-reporting	No.	Farms Re-reporting
Newfoundland.....	1931	...	...	...	...	...	...	...	...	...
	1941	...	...	...	...	...	...	...	...	...
	1951	185	169	126	507	476	136	118	—	—
	1956	268	255	296	735	686	83	66	—	—
P. E. Island.....	1931	3,885	3,741	176	369	356	4,193	3,641	—	—
	1941	3,570	3,485	577	494	465	4,128	3,457	4	4
	1951	4,147	4,021	2,776	1,679	1,614	3,813	3,181	18	18
	1956	4,511	4,305	4,840	3,247	3,089	3,519	2,658	238	238
Nova Scotia.....	1931	10,297	9,982	424	1,704	1,633	2,848	2,578	—	—
	1941	9,430	9,092	1,386	2,697	2,475	3,023	2,684	2	2
	1951	6,970	6,757	4,307	5,687	5,308	2,178	1,901	16	16
	1956	8,209	7,804	6,537	7,200	6,685	2,510	2,025	88	88
New Brunswick.....	1931	10,425	9,998	289	1,126	1,093	4,505	4,243	—	—
	1941	8,677	8,403	1,140	1,861	1,762	4,344	4,006	15	15
	1951	7,999	7,808	5,221	4,786	4,528	2,439	2,299	211	211
	1956	8,757	8,413	7,646	5,614	5,197	1,478	1,341	598	598
Quebec.....	1931	26,877	25,741	2,417	5,152	4,939	36,251	34,029	—	—
	1941	27,026	26,412	5,869	6,703	6,365	39,274	36,554	55	55
	1951	41,602	40,937	31,971	19,167	18,438	30,692	28,589	420	418
	1956	52,738	51,492	54,322	28,758	27,382	21,480	19,446	1,481	1,475
Ontario.....	1931	125,716	115,833	18,993	14,586	13,875	45,380	40,082	—	—
	1941	128,744	118,829	35,460	17,537	16,312	32,801	28,193	796	786
	1951	114,870	107,031	105,204	41,486	38,481	20,243	16,524	10,031	9,856
	1956	117,321	105,574	136,062	58,041	52,859	24,289	18,214	16,644	16,294
Manitoba.....	1931	25,588	24,450	14,366	3,260	3,123	17,557	13,820	355	351
	1941	27,074	26,410	22,050	7,566	7,248	15,772	12,639	1,714	1,655
	1951	32,060	30,848	50,984	21,163	19,937	17,370	14,150	15,268	14,663
	1956	32,619	31,312	59,265	28,556	26,255	24,305	18,689	21,425	20,679

¹ Includes duplication where farms had tractors under 15 h.p. and 15 h.p. or over.

52.—Farm Machinery by Province, Censuses of 1931, 1941, 1951 and 1956—concluded

Province and Year	Automobiles		Tractors		Motor Trucks		Gasoline Engines		Grain Combines		
	No.	Farms Re- porting	No.	Farms Re- porting	No.	Farms Re- porting	No.	Farms Re- porting	No.	Farms Re- porting	
Saskatchewan	1931	65,094	62,568	43,308	39,434	10,938	10,559	38,549	32,066	6,019	5,919
	1941	57,093	55,767	54,129	51,353 ¹	21,285	20,225	33,882	27,935	11,202	10,822
	1951	62,963	60,916	106,664	90,367	52,626	49,277	55,763	41,630	42,997	41,215
	1956	64,941	62,692	121,388	91,768	74,498	66,076	100,732	63,253	61,861	58,699
Alberta.....	1931	42,817	41,025	23,985	21,996	7,319	7,080	26,938	22,137	2,523	2,461
	1941	44,090	42,678	36,445	34,456 ¹	14,512	13,634	31,091	25,199	5,165	4,910
	1951	46,314	44,431	79,282	65,369	39,723	35,732	46,003	34,248	20,852	19,569
	1956	47,714	44,778	94,156	68,393	58,749	49,974	63,462	41,024	33,531	31,317
British Columbia...	1931	10,585	10,034	1,402	1,312	3,947	3,707	3,544	3,051	20	19
	1941	9,757	9,318	2,696	2,573 ¹	4,825	4,490	3,910	3,245	60	54
	1951	12,557	12,103	13,148	11,535	9,291	8,460	4,407	3,375	687	665
	1956	14,933	13,804	15,282	12,422	11,758	10,254	7,896	5,196	1,060	995
Canada.....	1931	321,284	303,372	105,360	97,262	48,401	46,365	179,765	155,677	8,917	8,750
	1941	315,461	300,394	159,752	152,607 ¹	77,480	72,976	168,225	143,912	19,013	18,303
	1951 ²	329,667	315,021	399,686	342,658	196,122	182,255	183,051	146,018	90,500	86,631
	1956 ²	352,018	336,436	499,811	388,816	277,183	248,474	249,779	171,925	136,927	130,384

¹ Includes duplication where farms had tractors under 15 h.p. and 15 h.p. or over. and Northwest Territories.

² Includes the Yukon

Farm Electrification.—Nearly three-quarters of the farms in Canada reported electric power in 1956. Provinces were divided into two distinct groups—above and below the national average of 73.5 p.c. In the first group were Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba and British Columbia in which the percentage of farms reporting electric power ranged from 81.9 p.c. in British Columbia to 89.1 p.c. in Ontario. The second group included Newfoundland, Prince Edward Island, Saskatchewan and Alberta where the percentages ranged from 39.7 p.c. in Prince Edward Island to 51.5 p.c. in Alberta.

Power line was reported to be the source of power on over 95 p.c. of the farms reporting electricity for Canada and for all provinces except Saskatchewan and Alberta. In Saskatchewan, 79.5 p.c. of the farms reporting electricity reported power line source, 7.8 p.c. wind electric and 12.8 p.c. other sources. In Alberta, 87.6 p.c. of the farms reporting electricity reported power line source, 3.2 p.c. wind electric and 9.4 p.c. other sources.

53.—Farm Electrification by Province, Census 1956

Province	Farms Reporting One or More Sources of Power	Source of Supply		
		Power Line	Wind Electric	Other Sources
	No.	No.	No.	No.
Newfoundland.....	1,059	1,010	4	45
Prince Edward Island.....	3,748	3,678	5	67
Nova Scotia.....	18,677	18,604	10	66
New Brunswick.....	19,328	18,969	64	297
Quebec.....	108,015	107,259	215	553
Ontario.....	125,310	124,873	79	365
Manitoba.....	41,464	41,003	* 66	399
Saskatchewan.....	43,778	34,819	3,421	5,604
Alberta.....	40,937	35,844	1,312	3,839
British Columbia.....	20,279	19,334	19	930
Canada ¹	422,604	405,396	5,195	12,171

¹ Includes the Yukon and Northwest Territories.

Section 6.—International Crop Statistics

Tables 54 and 55 are based on estimates published in October and November 1957 by the Foreign Agricultural Service, United States Department of Agriculture, and give the acreages and production of wheat and the production of oats and barley for the harvests of 1955 and 1956 with averages for the years 1950-54 in the leading countries of the world.

54.—Estimated Acreages and Production of Wheat Harvested in 1955 and 1956 in Specified Countries with Average for 1950-54

Continent and Country	Acreages of Wheat			Production of Wheat		
	Average 1950-54	1955	1956	Average 1950-54	1955	1956
	'000 acres	'000 acres	'000 acres	'000 bu.	'000 bu.	'000 bu.
North America¹	90,780	70,850	74,950	1,646,000	1,461,000	1,612,000
Canada.....	25,702	21,506	22,781	528,986	494,142	573,060
Mexico.....	1,647	1,977	2,259	21,788	31,230	40,420
United States.....	63,361	47,285	49,817	1,094,183	934,731	997,207
Europe¹	71,240	71,970	67,410	1,660,000	1,820,000	1,600,000
Austria.....	573	604	620	16,920	20,180	20,960
Belgium.....	421	473	464	20,278	26,250	22,050
Denmark.....	195	164	164	10,630	9,330	9,480
Finland.....	419	340	355	9,920	7,700	8,000
France.....	10,916	11,252	7,000	315,244	380,830	240,000
Greece.....	2,415	2,599	2,622	40,042	49,000	45,730
Ireland.....	362	360	350	13,036	14,900	15,900
Italy.....	12,085	12,300	12,308	288,080	349,210	318,980
Luxembourg.....	45	44	38	1,382	1,380	1,140
Netherlands.....	209	220	212	11,376	12,970	11,340
Norway.....	56	45	51	1,682	1,170	2,050
Portugal.....	1,785	1,991	1,942	23,526	18,650	20,860
Spain.....	10,470	10,536	10,638	155,000	150,000	155,000
Sweden.....	899	875	981	29,640	26,350	34,970
Switzerland.....	219	236	190	9,080	10,850	6,170
United Kingdom.....	2,263	1,949	2,283	94,646	97,070	106,960
Western Germany.....	2,728	2,875	2,830	110,228	123,570	127,560
Yugoslavia.....	—	4,700	4,003	—	89,500	64,670
Other Europe ²	20,240	20,400	20,360	429,000	431,000	388,000
Union of Soviet Socialist Republics (Europe and Asia).....	111,500	..	..	..	..	..
Asia¹	127,760	137,970	142,850	1,760,000	1,875,000	1,875,000
India.....	24,422	27,517	30,386	251,586	327,710	319,910
Iran.....	..	..	..	75,100	85,000	82,670
Iraq.....	1,871	..	..	22,210	17,390	22,850
Japan.....	1,766	1,639	1,625	53,322	53,940	50,520
Lebanon.....	165	165	165	1,902	2,020	2,020
Pakistan.....	10,364	10,653	11,280	129,800	118,420	124,210
Syria.....	2,277	2,718	2,718	26,510	22,050	32,150
Turkey.....	13,514	17,445	18,125	213,598	253,530	235,160
Africa¹	16,490	16,860	17,550	183,000	193,000	213,000
Algeria.....	4,267	4,940	4,800	41,508	46,080	54,600
Egypt.....	1,631	1,593	1,630	49,060	53,330	56,860
French Morocco.....	3,496	4,112	3,783	35,302	35,070	38,470
Tunisia.....	2,399	1,955	2,937	19,796	14,520	17,540
Union of South Africa.....	3,020	2,474	2,671	28,040	29,210	30,680
South America¹	17,730	16,810	20,080	307,000	304,000	360,000
Argentina.....	11,871	10,037	13,325	216,204	192,900	260,880
Brazil.....	1,310	..	..	18,900	27,000	30,000
Chile.....	1,933	1,925	1,894	37,446	38,500	36,860
Peru.....	391	420	408	5,114	6,140	4,780
Uruguay.....	1,515	1,968	1,614	22,376	31,210	19,980
Oceania.....	10,832	10,238	7,865	186,630	198,250	137,700
Australia.....	10,716	10,170	7,800	181,910	195,600	135,000
New Zealand.....	116	68	65	4,720	2,650	2,700
World Totals¹	446,330	474,700	484,700	6,985,000	7,400,000	7,800,000

¹ Estimated totals are rounded to millions and include allowances for missing data for countries shown and data for producing countries not shown.

² Includes Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland and Romania.

55.—Estimated Production of Oats and Barley Harvested in 1955 and 1956 in Specified Countries with Average for 1950-54

Continent and Country	Oats			Barley		
	Average 1950-54	1955	1956	Average 1950-54	1955	1956
	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.
North America¹	1,703,000	1,916,000	1,679,000	519,000	662,000	651,000
Canada.....	414,086	407,783	524,445	228,334	252,385	269,065
Mexico.....	3,759	4,850	2,070	7,554	8,810	9,090
United States.....	1,285,417	1,503,074	1,152,652	283,026	401,225	372,495
Europe¹	1,385,000	1,375,000	1,447,000	785,000	920,000	1,065,000
Austria.....	24,156	25,060	25,800	13,288	15,880	17,660
Belgium.....	32,462	33,140	33,340	12,344	12,880	13,240
Denmark.....	58,740	59,450	58,700	88,490	101,050	110,320
Finland.....	57,500	47,000	49,500	11,760	12,500	14,200
France.....	242,298	250,750	317,200	89,372	122,650	275,000
Greece.....	9,558	10,800	10,100	10,424	10,310	10,550
Ireland.....	38,744	39,690	37,520	8,910	11,480	14,650
Italy.....	37,516	36,060	34,890	13,057	13,400	12,650
Luxembourg.....	2,602	2,970	2,900	..	..	..
Netherlands.....	32,210	39,960	33,670	11,048	12,110	12,740
Norway.....	11,726	7,850	12,500	7,350	9,620	13,660
Portugal.....	9,424	5,700	6,500	5,780	3,900	4,560
Spain.....	35,306	42,700	31,120	88,830	96,450	71,250
Sweden.....	59,744	41,130	79,170	14,850	18,740	28,130
Switzerland.....	4,946	4,640	6,160	2,581	2,900	4,370
United Kingdom.....	186,774	189,630	174,020	100,326	137,010	130,670
Western Germany.....	180,322	170,680	168,890	82,320	95,500	106,100
Yugoslavia.....	..	19,150	22,320	..	17,910	15,800
Other Europe ²	341,000	349,000	343,000	207,000	225,000	208,000
Union of Soviet Socialist Republics (Europe and Asia).....	..	..	..	..	..	..
Asia¹	106,000	108,000	108,000	805,000	840,000	805,000
China.....	..	..	..	325,000	..	..
India.....	..	..	..	116,414	133,930	128,290
Iran.....	..	..	..	36,798	40,420	36,740
Iraq.....	..	..	..	35,270	41,300	46,000
Japan.....	9,948	11,440	11,090	90,439	99,020	96,380
Lebanon.....	..	..	..	664	740	760
Manchuria.....	..	..	..	..	..	..
Pakistan.....	..	..	..	6,600	6,580	6,910
Syria.....	535	..	..	12,292	6,890	25,260
Turkey.....	24,958	24,530	26,320	128,380	137,100	100,000
Africa¹	23,000	17,000	12,000	146,000	124,000	155,000
Algeria.....	8,940	5,900	5,860	37,494	32,470	46,210
Egypt.....	..	..	..	4,976	5,820	5,920
French Morocco.....	3,978	2,110	1,590	71,220	57,330	72,340
Tunisia.....	1,074	..	..	8,920	4,050	7,160
Union of South Africa.....	8,350	..	..	2,200	..	..
South America¹	67,000	61,000	91,000	62,000	70,000	86,000
Argentina.....	56,284	49,810	78,540	39,320	43,680	62,670
Chile.....	6,800	7,400	7,190	4,316	4,600	4,330
Peru.....	..	..	..	8,980	10,560	7,670
Uruguay.....	2,816	2,800	3,470	1,344	1,330	1,990
Oceania	44,560	69,910	55,840	33,739	45,550	55,100
Australia.....	42,252	67,500	53,120	31,351	43,440	52,500
New Zealand.....	2,308	2,410	2,720	2,388	2,110	2,600
World Totals¹	4,165,000	4,450,000	4,275,000	2,695,000	3,100,000	3,340,000

¹ Estimated totals are rounded to millions and include allowances for missing data for countries shown and for other producing countries not shown.

² Comprises Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland and Romania.

CHAPTER X.—FORESTRY*

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Land is one of the bases of the Canadian economy and wise use of the land is the foundation of good forestry. In addition to providing the greatest amount of the most usable woods as economically as possible, good forestry aids in maintaining agricultural lands against drought and erosion; continuously protects water-catchment areas and assures supplies of water; furnishes cover for game and fur-bearing animals; and gives opportunity for recreation which only the forests can provide.

Section 1.—Forest Regions†

The forests of Canada cover a vast area in the north temperate climatic zone. Wide variations in physiographic, soil and climatic conditions cause marked differences in the character of the forests in different parts of the country; hence eight fairly well defined forest regions may be recognized. These regions, with the relative proportion of the total area of all forest regions occupied by each, are as follows:—

Region	Percentage of Forested Area	Region	Percentage of Forested Area
Boreal.....	82.1	Acadian.....	2.0
Great Lakes-St. Lawrence.....	6.5	Columbia.....	0.8
Subalpine.....	3.7	Deciduous.....	0.4
Montane.....	2.3		
Coast.....	2.2	TOTAL.....	100.0

Boreal Forest Region.—The Boreal Region comprises the greater part of the forested area of Canada, forming a continuous belt from the Atlantic Ocean westward to the Rocky Mountains and northwestward to Alaska. The white and the black spruces are characteristic tree species; other prominent conifers are tamarack, which ranges throughout the region, balsam fir and jack pine in the eastern and central portions, and alpine fir and

* Sections of this Chapter that deal with forestry and the federal forestry program were revised in the Forest Economics Section, Forestry Branch, Department of Northern Affairs and National Resources. Provincial forestry programs were prepared by the forestry officials of the respective provincial governments. Sections dealing with forest and allied industries, except as otherwise noted, have been revised in the Forestry Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

† A more detailed discussion of forest regions is given in Bulletin No. 89, *A Forest Classification for Canada* by W. E. D. Halliday, a publication of the Forestry Branch, Department of Northern Affairs and National Resources, Ottawa. Accounts of variations in Canadian physiography, climate, etc., are given in Chapter I of this volume.

lodgepole pine in the western and northwestern parts. Although the region is primarily coniferous there is a general admixture of broadleaved trees such as the white birches and the poplars; these are important in the central and south-central portions, particularly where the region grades into the Grassland Formation of the prairies. In turn the proportion of barrens (non-forested rock, muskeg and tundra) increases in the northern parts until the region finally merges into the Tundra Formation. In the southern parts of the eastern portions of the region there is considerable intrusion of species from the Great Lakes-St. Lawrence Forest Region, such as the white and the red pines, yellow birch, sugar maple, black ash and eastern white cedar.

Subalpine Forest Region.—Coniferous forest found on the higher slopes of the mountains east of the Coast Ranges in British Columbia is known as the Subalpine Region. It extends northward to the divide between the drainage of the Skeena, Nass and Peace Rivers and that of the Stikine and Liard Rivers. The characteristic species are Engelmann spruce, alpine fir and lodgepole pine. There is a close relationship with the Boreal Region, from which the black and the white spruces and aspen intrude, more particularly in the northern parts. There is also some entry of Douglas fir from the Montane Forest, as well as western hemlock, western red cedar and amabilis fir from the Coast Forest. Other species found are western larch, whitebark pine and limber pine.

Montane Forest Region.—This region occupies a large part of the interior uplands of British Columbia, part of the Kootenay Valley and a small area on the east side of the Rocky Mountains. It is a northern extension of the typical forest of much of the western mountain system in the United States, and comes in contact with the Coast, Columbia and Subalpine Forests. Ponderosa pine is a characteristic species of the southern portions, to which it is restricted. Douglas fir is found throughout but more particularly in the central and southern parts. Lodgepole pine and aspen are generally present, the latter being well represented in the north-central portions. Engelmann spruce and alpine fir from the Subalpine Region become important constituents in the northern parts, together with white birch. The Boreal white spruce also enters here. Extensive bunch grass and sage brush communities of the Grassland Formation are found in many of the river valleys.

Coast Forest Region.—This is part of the Pacific Coast forest of North America. Essentially coniferous, the Coast Region consists principally of western red cedar and western hemlock, with Douglas fir in the south and Sitka spruce in the north. Amabilis fir and yellow cedar occur widely and, together with mountain hemlock and alpine fir, are common towards the timberline. Western white pine is found in the southern parts. Broadleaved trees such as black cottonwood, red alder and broadleaf maple have a limited distribution in this region. Arbutus and garry oak occur in Canada only on the southeast coast of Vancouver Island and the adjacent mainland. These are species that have entered from the Montane Forest in the United States.

Columbia Forest Region.—A large part of the Kootenay River valley, the upper valleys of the Thompson and Fraser Rivers, and the Quesnel Lake area of British Columbia contain a coniferous forest closely resembling that of the Coast Region. Western red cedar and western hemlock are the characteristic species of this Columbia Region. Associated with these are Douglas fir, which is of general distribution, and, in the southern parts, western white pine, western larch and grand fir. Engelmann spruce from the Subalpine Region is important in the upper Fraser Valley and is found to some extent at the upper levels of the forest in the remainder of the region. Towards lower elevations in the west and in parts of the Kootenay Valley, the forest grades into the Montane Region and in a few places into the Grassland Formation.

Deciduous Forest Region.—A small portion of this forest, widespread in the eastern United States, is found in southwestern Ontario between Lakes Huron, Erie and Ontario. Here with the broadleaved trees common to the Great Lakes-St. Lawrence Forest Region, such as sugar maple, beech, white elm, basswood, red ash, white oak and butternut, are scattered a number of other broadleaved species which have their northern limits in this locality. Among these are the tulip-tree, cucumber-tree, papaw, red mulberry, Kentucky

coffee-tree, redbud, black gum, blue ash, sassafras, mockernut and pignut hickories, and scarlet, black and pin oaks. Black walnut, sycamore and swamp white oak also are largely confined to this region. Conifers are few, mainly scattered white pine, tamarack, red juniper and hemlock.

Great Lakes-St. Lawrence Forest Region.—Along the Great Lakes and the St. Lawrence River valley is a forest of a very mixed nature, characterized by the white and the red pines, eastern hemlock and yellow birch with certain dominant broadleaved species common to the Deciduous Forest Region, such as sugar maple, red maple, red oak, basswood and white elm. Other species with wide range are the eastern white cedar, the largetooth aspen and, to a lesser extent, beech, white oak, butternut and white ash. Boreal species, such as the white and the black spruces, balsam fir, jack pine, poplar and white birch, intrude from the north, and in the east, red spruce from the Acadian Forest becomes abundant in certain portions.

Acadian Forest Region.—The greater part of the Maritime Provinces contains a forest closely related to both the Great Lakes-St. Lawrence and the Boreal Regions. The characteristic species is red spruce, with which are associated balsam fir, yellow birch and sugar maple, with some red pine, white pine, beech and hemlock. Other species of wide distribution are the black and the white spruces, red oak, white elm, black ash, red maple, white birch, wire birch and the poplars. Eastern white cedar and jack pine, however, are restricted almost entirely to the western half of the region.

Section 2.—Native Tree Species

There are more than 150 tree species in Canada of which 31 are conifers, commonly called 'softwoods'. About two-thirds of these softwoods and about 10 p.c. of the large number of deciduous or 'hardwood' species are of commercial importance. About 82 p.c. of the volume of merchantable timber is made up of softwood species.

The dominant species existing in each forest region are given in Section 1. Detailed information is contained in Forestry Branch Bulletin No. 61, *Native Trees of Canada*,* published by the Department of Northern Affairs and National Resources.

Section 3.—Forest Resources

The forested area of Canada is estimated at 1,621,045 sq. miles or 46 p.c. of the total land area.

Approximately 782,000 sq. miles or 48 p.c. of the total forested area of Canada is classified as non-productive, i.e., incapable of producing crops of merchantable wood. However, these forests do provide valuable protection for drainage basins and shelter for game and fur-bearing animals.

Of the productive portion of the forested area, 642,000 sq. miles are considered to be now accessible for commercial operations. The potentially accessible productive forests contain much valuable timber suitable for lumber and pulpwood. At present it is not economical to conduct cutting operations on these areas but, as low-cost methods of transportation are developed, as accessible forested areas become depleted, and as the demand for wood products increases, these potentially accessible productive forests will be brought progressively into commercial development. Because of less favourable climatic conditions the productive capacity of these timberlands is expected to be lower than that of the accessible areas now being logged.

The predominant part played by the lumber and other forest products industries in the development of Canada has resulted in a widespread tendency to evaluate the forest in terms of timber alone. A growing realization of the economic importance of the non-timber values, however, is bringing about increasing recognition of the true value of the forests and is thus developing a broader concept of forestry.

* Obtainable from the Queen's Printer, Ottawa, price \$1.50.

Inventories of forest resources are made periodically by provincial forest authorities and, with their co-operation, the Forestry Branch of the Department of Northern Affairs and National Resources compiles the National Forest Inventory. The latest estimates of the total stand of timber, by province and region, appear in Table 1. These estimates are subject to constant revision as more accurate and complete inventories are compiled.

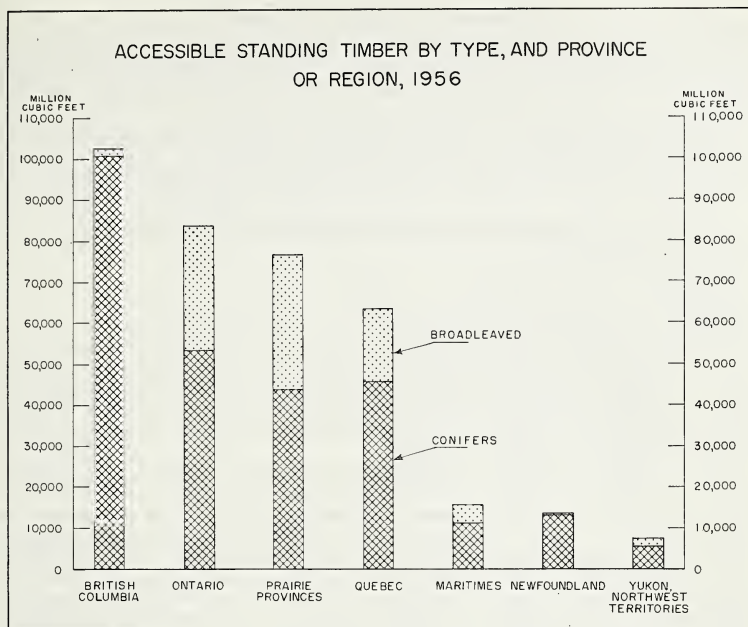
1.—Estimate of Standing Timber, by Type and Size and by Province and Region 1956

Province and Region	Conifers			Broadleaved			Totals		
	Saw Timber	Smaller Material	Total Equivalent Volume	Saw Timber	Smaller Material	Total Equivalent Volume	Saw Timber	Smaller Material	Total Equivalent Volume
Accessible	Million ft. b.m.	'000 cords	Million cu. ft. ¹	Million ft. b.m.	'000 cords	Million cu. ft. ¹	Million ft. b.m.	'000 cords	Million cu. ft. ¹
Newfoundland—									
Labrador.....	5,474	62,041	6,368	416	2,141	265	5,890	64,182	6,633
Island.....	5,857	65,354	6,727	1,039	1,150	305	6,896	66,504	7,032
Prince Edward Island...	220	672	101	47	460	49	267	1,132	150
Nova Scotia.....	4,849	23,167	2,939	1,261	5,363	708	6,110	28,530	3,647
New Brunswick.....	12,250	65,294	8,000	9,500	24,706	4,000	21,750	90,000	12,000
TOTALS, ATLANTIC PROVINCES.....	28,650	216,528	24,135	12,263	33,820	5,327	40,913	250,348	29,462
Quebec.....	37,005	450,495	45,693	12,950	176,108	17,559	49,955	626,603	63,252
Ontario.....	80,703	438,771	53,436	78,359	171,242	30,228	159,062	610,013	83,664
TOTALS, CENTRAL PROVINCES.....	117,708	889,266	99,129	91,309	347,350	47,787	209,017	1,236,616	146,916
Manitoba.....	4,896	55,405	5,689	4,605	18,651	2,506	9,501	74,056	8,195
Saskatchewan.....	5,881	55,812	5,920	10,187	51,882	6,447	16,068	107,694	12,367
Alberta.....	65,277	225,235	32,200	61,224	136,061	23,810	126,501	361,296	56,010
TOTALS, PRAIRIE PROVINCES.....	76,054	336,452	43,809	76,016	206,594	32,763	152,070	543,046	76,572
British Columbia.....	458,015	109,581	100,918	8,137	..	1,627	466,152	109,581	102,545
Northwest Territories...	1,000	34,500	3,132	1,000	16,500	1,603	2,000	51,000	4,735
Yukon Territory.....	1,750	25,000	2,475	250	6,000	560	2,000	31,000	3,035
TOTALS, ACCESSIBLE.....	683,177	1,611,327	273,598	188,975	610,264	89,667	872,152	2,221,591	363,265
TOTALS, POTENTIALLY ACCESSIBLE.....	215,146	794,639	110,574	5,265	92,750	8,937	220,411	887,389	119,511
Canada.....	898,323	2,405,966	384,172	194,240	703,014	98,604	1,092,563	3,108,980	482,77

¹ Cubic volumes do not include wood in stumps and unusable tops.

Forest Land Tenure.—Private individuals or corporations own 5 p.c. of the total forest land of Canada and the remaining 95 p.c. is still in the possession of the Crown in the right of the Federal or the Provincial Governments. Rights to cut Crown timber under lease or licence have been granted on 11 p.c. of the total forest land. Some of the unalienated land has already been logged and has reverted to the Crown but it is mainly located in the less accessible areas.

Farm woodlots on the 623,000 farms across Canada cover about 22,780,000 acres (Census of 1951)—13 p.c. of the total farm area and over 6 p.c. of the total accessible productive forest. These small wooded tracts ranging in size from three or four acres to 200 or more acres are among the most accessible forests in Canada. Further, the woodlots of Eastern Canada are in general highly productive because they lie in the southern parts of the country and frequently occupy soils that are considerably higher in quality than those typical of the northern forests.



2.—Tenure of Occupied Forest Land by Province 1956

(Net area in sq. miles)

Province or Territory	Provincial Crown Land			Federal Crown Land			Privately Owned Land			Total Occupied Forest Land
	Leases and Licences	Permits and Sales	Total	Leases and Licences	Other	Total	Farm Wood- lots	Other	Total	
Newfoundland.....	18,836	—	18,836	—	—	—	58	1,784	1,842	20,678
<i>Labrador.....</i>	<i>12,008</i>	<i>—</i>	<i>12,008</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>12,008</i>
<i>Island.....</i>	<i>6,828</i>	<i>—</i>	<i>6,828</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>58</i>	<i>1,784</i>	<i>1,842</i>	<i>8,670</i>
Prince Edward Island....	—	—	—	—	3	3	541	65	606	609
Nova Scotia.....	700	44	744	—	52	52	2,884	5,581	8,465	9,261
New Brunswick.....	10,732	—	10,732	—	574	574	3,194	7,932	11,126	22,432
Quebec.....	64,839	—	64,839	—	—	—	9,179	12,434	21,613	86,452
Ontario.....	75,391	—	75,391	—	206	206	6,020	12,166	18,186	93,783
Manitoba.....	1,522	839	2,361	—	456	456	2,832	1,801	4,633	7,450
Saskatchewan.....	1,406	44	1,450	—	575	575	4,602	1,372	5,974	7,999
Alberta.....	3,042	986	4,028	289	1,325	1,614	4,477	—	4,477	10,119
British Columbia.....	3,760	3,487	7,247	—	808	808	1,807	6,688	8,495	16,550
Northwest Territories....	—	—	—	9	—	9	—	—	—	9
Yukon Territory.....	—	—	—	19	—	19	—	—	—	19
Canada.....	180,228	5,400	185,628	317	3,999	4,316	35,594	49,823	85,417	275,361

Section 4.—Forest Depletion

A general account of forest depletion and increment together with statistics of forest fires and fire losses is presented in this Section. Details of the scientific control of those influences that account for wastage, such as forest fires, insect pests, etc., are dealt with in Section 5.

The average annual rate and cause of depletion of reserves of merchantable timber during the ten years 1945-54, together with preliminary data for 1955, are given in Table 3. Of the total depletion of the forests in the ten-year period, 94 p.c. was utilized and 6 p.c. was destroyed by fire. The utilization of 3,023,922,000 cu. feet comprised 45 p.c. logs and bolts, 38 p.c. pulpwood, 14 p.c. fuelwood, and the remaining 3 p.c. miscellaneous products. Approximately 6 p.c. of the total utilization was exported in the form of logs and bolts and pulpwood.

The more efficient utilization of cut timber is an important factor related to forest depletion, for there is little doubt that in the past too high a percentage of the sawn log was discarded. Changes of great significance have been taking place in the uses of wood, permitting the utilization of sizes, qualities and species previously considered unmerchantable. The development and the manufacture of rayon, cellophane and numerous other products in the cellulose industry is rapidly extending the use of wood. The increasing demand for plastic-wood products, fibre board and laminated wood is resulting in greater use of inferior classes of wood and therefore in the more complete utilization of forest resources and the elimination of much waste.

The accessible portion of the productive forests of Canada, covering an area of 642,000 sq. miles, constitute the reserve from which forest production will be obtained for many years to come. The supply of merchantable timber on this area is estimated to be 363,265,000,000 cu. feet, of which approximately 153,300,000,000 cu. feet are located on that portion of the area at present under lease or private ownership. The utilization in 1955 of 3,280,000,000 cu. feet represents 0.9 p.c. of the accessible productive volume, and 2.1 p.c. of the merchantable volume on the occupied areas (where the utilization is actually taking place). These percentages show that cutting is concentrated in the occupied areas and the wood that grows on the unoccupied areas is not as yet being used. This situation emphasizes the necessity for the orderly management of all commercial forests if the forest industries are to maintain their dominant position in the development of the natural resources of Canada.

3.—Average Forest Utilization and Depletion 1954 and 1955 compared with Ten-Year Average 1945-54

Item	Usable Wood			Depletion ¹		
	Av. 1945-54	1954	1955 ^p	Av. 1945-54	1954	1955 ^p
	M cu. ft.	M cu. ft.	M cu. ft.	p.c.	p.c.	p.c.
Products Utilized—						
Logs and Bolts—						
Domestic use.....	1,346,324	1,482,531	1,555,634	42.0	46.3	44.1
Exported.....	10,863	9,702	7,501	0.3	0.3	0.2
Pulpwood—						
Domestic use.....	978,484	1,097,637	1,207,439	30.5	34.3	34.2
Exported.....	173,105	155,226	160,037	5.4	4.8	4.5
Fuelwood.....	433,486	313,461	289,872	13.5	9.8	8.2
Other products.....	81,660	63,756	59,587	2.6	2.0	1.7
Average Annual Utilization.....	3,023,922	3,122,313	3,280,070	94.3	97.5	92.9
Wastage—						
By forest fires.....	182,519	81,170	250,770	5.7	2.5	7.1
Average Annual Depletion.....	3,206,441	3,203,483	3,530,840	100.0	100.0	100.0

¹ Does not include wastage caused by agencies other than fire, such as insects, disease and natural mortality, for which no reliable estimates are available.

Forest Fire Statistics.—During 1955 there were 6,360 forest fires in Canada (exclusive of 156 within the Yukon and Northwest Territories) compared with 3,022 in 1954 and an annual average of 5,141 for the period 1945-54. In 1954 only about 266,000 acres were damaged compared with over 1,379,000 in 1955. However, the 1955 area burned was almost identical to the average for the previous decade while the size of the average fire was lower. Costs of fire fighting are more indicative of the difference in severity of the two fire seasons—a little less than \$1,000,000 in 1954 and more than \$6,500,000 in 1955. The average of similar costs for the period 1945-54 was about \$2,000,000. About 30 p.c. of all forest fires in 1955 were caused by lightning.

4.—Forest Fire Losses 1954 and 1955 compared with Ten-Year Average 1945-54

Item	Provinces ¹			Yukon and Northwest Territories
	Av. 1945-54 ²	1954 ³	1955 ³	
Totals, Fires No.	5,141	3,022	6,360	156
Fires under 10 acres..... "	3,902	2,573	5,213	81
Fires 10 acres or over..... "	1,239	449	1,147	75
Area Burned acres	1,373,596	265,626	1,379,567	234,375
Merchantable timber..... "	255,278	72,136	344,556	4,659
Young growth..... "	366,804	50,677	241,513	55,021
Cut-over lands..... "	153,996	38,981	563,868	2,009
Non-forested lands..... "	597,518	103,832	229,630	172,686
Average size of fire acres	267	88	217	1,502
Merchantable Timber Burned—				
Saw timber..... M ft. b.m.	382,041	46,474	238,141	25,549
Smaller material..... cords	1,054,139	834,055	2,321,077	8,713
Estimated Values Destroyed⁴ \$	3,655,718	1,667,685	7,140,960	306,888
Merchantable timber..... \$	1,575,591	1,246,176	4,491,543	159,376
Young growth..... \$	985,308	158,232	763,497	110,043
Cut-over lands..... \$	130,498	45,895	565,718	2,009
Other property burned..... \$	964,321	217,382	1,320,202	35,460
Actual Cost of Fire Fighting \$	2,059,827	931,231	6,570,944	110,244
Totals, Damage and Fire Fighting Costs .. \$	5,715,545	2,598,916	13,711,904	417,132
Area under protection sq. miles	..	1,106,694	1,052,590	118,500

¹ Includes federal lands within provincial boundaries.

² Newfoundland excluded; no records available prior to 1949.

³ Newfoundland included.

⁴ Figures do not include such values as damage to soil, stream-flow, wildlife, recreation and tourist facilities, or the enhanced values resulting from silviculture and management practices.

5.—Forest Fire Losses by Province 1954 and 1955 compared with Ten-Year Average 1945-54

Item	Annual Average 1945-54	1954	1955
Newfoundland—			
Forest fires..... No.	..	108	137
Area burned..... acres	..	1,839	4,687
Fire fighting cost and damage..... \$	..	..	6,329
Nova Scotia—			
Forest fires..... No.	271	359	261
Area burned..... acres	10,302	4,194	20,466
Fire fighting cost and damage..... \$	130,044	51,458	78,542
New Brunswick—			
Forest fires..... No.	249	187	164
Area burned..... acres	16,836	2,002	12,788
Fire fighting cost and damage..... \$	212,488	19,775	156,090

5.—Forest Fire Losses by Province 1954 and 1955 compared with Ten-Year Average 1945-54—concluded

Item	Annual Average 1945-54	1954	1955
Quebec—			
Forest fires..... No.	1,134	392	1,276
Area burned..... acres	171,259	51,959	549,550
Fire fighting cost and damage..... \$	1,106,023	158,545	4,914,672
Ontario—			
Forest fires..... No.	1,335	881	2,252
Area burned..... acres	155,071	54,693	396,423
Fire fighting cost and damage..... \$	1,292,302	960,810	6,512,453
Manitoba—			
Forest fires..... No.	262	121	327
Area burned..... acres	184,771	5,871	106,926
Fire fighting cost and damage..... \$	256,043	18,655	350,461
Saskatchewan—			
Forest fires..... No.	126	57	175
Area burned..... acres	138,161	3,802	33,497
Fire fighting cost and damage..... \$	110,394	15,410	109,363
Alberta—			
Forest fires..... No.	191	80	232
Area burned..... acres	395,610	128,337	201,294
Fire fighting cost and damage..... \$	1,299,252	1,128,538	1,243,840
British Columbia—			
Forest fires..... No.	1,491	764	1,384
Area burned..... acres	279,952	10,309	46,694
Fire fighting cost and damage..... \$	1,264,147	211,792	233,974
Federal Lands—			
Yukon Territory—			
Forest fires..... No.	..	55	75
Area burned..... acres	..	7,109	41,329
Fire fighting cost and damage..... \$	..	27,627	30,996
Northwest Territories—			
Forest fires..... No.	..	57	81
Area burned..... acres	..	1,124,480	193,046
Fire fighting cost and damage..... \$	..	289,214	386,136
National Parks—			
Forest fires..... No.	32	18	43
Area burned..... acres	4,564	151	1,220
Fire fighting cost and damage..... \$	8,910	1,435	76,507
Indian Lands—			
Forest fires..... No.	45	29	36
Area burned..... acres	16,968	2,093	1,136
Fire fighting cost and damage..... \$	35,675	3,962	12,566
Other Federal Lands—			
Forest fires..... No.	..	26	73 ¹
Area burned..... acres	..	376	4,886
Fire fighting cost and damage..... \$	..	1,170	17,107

¹ Includes military areas.

6.—Forest Fires by Cause 1954 and 1955 compared with Ten-Year Average 1945-54

Cause	Provinces ¹						Yukon and Northwest Territories	
	Av. 1945-54 ²		1954 ²		1955 ²		1955	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Camp fires.....	829	16	580	19	899	14	42	27
Smokers.....	1,164	23	515	17	1,174	19	21	13
Settlers.....	535	10	251	8	632	10	—	—
Railways.....	546	11	329	11	570	9	5	3
Lightning.....	924	18	447	15	1,893	30	54	34
Industrial operations.....	244	5	148	5	295	5	1	1
Incendiary.....	139	3	99	3	156	2	—	—
Public works.....	79	1	53	2	78	1	1	1
Miscellaneous known.....	449	9	451	15	387	6	3	2
Unknown.....	232	4	149	5	276	4	29	19
Totals.....	5,141	100	3,022	100	6,360	100	156	100

¹ Includes federal lands within provincial boundaries.
prior to 1949.

² Newfoundland included.

² Newfoundland excluded; no records available

Section 5.—Forest Administration, Conservation and Research

Subsection 1.—Federal Forestry Program

Administration.—The Federal Government is responsible for the protection and administration of the forest resources of the Yukon and Northwest Territories and of other federal lands such as the National Parks, forest experiment stations, military areas and Indian reserves. The Federal Government also administers the Canada Forestry Act which provides, among other things, authority for the operation of forest experiment stations and forest products laboratories.

The Act also authorizes the granting of federal assistance to the provinces to enable them to improve the management of their own forests. Under the Federal-Provincial Agreements signed under authority of the Act, seven of Canada's ten provinces have undertaken a forest inventory with federal financial assistance, and six provinces have reforestation agreements. The history of the Federal-Provincial Agreements and their relation to the Canada Forestry Act is described in a special article appearing in the 1956 Year Book, pp. 459-466. In 1957 the Federal Government broadened the implementation of the Canada Forestry Act by providing financial assistance to the provinces for forest fire protection. A total of \$5,000,000 is to be made available for this purpose during the next five years. Federal contributions will be applicable to capital expenditures, such as the cost of fire protection equipment and improvements, and of forest access roads, trails and buildings required for forest fire protection.

The Forestry Branch of the Department of Northern Affairs and National Resources has been continuing work on the aerial forest mapping of federally administered lands and other territories. For example, forest inventory maps were prepared from air photographs for portions of the Yukon and Northwest Territories and data were collected on the ground to support the interpretation of the photographs. The development of instrumental aids in forest photography and in interpretation is being continued by this Branch.

Forestry Research.—In the field of forestry the chief responsibility of the Federal Government is to carry out research in problems affecting the forests of Canada and their development, conservation and more effective utilization. To this end forest research and forest products research facilities have been expanded greatly throughout Canada during the past five years. The Forestry Branch of the Federal Department of Northern Affairs and National Resources conducts research in forest economics, silviculture, management, forest inventory methods, forest fire protection and in forest products. An extensive program of research is under way on the government experiment stations and on other lands, where an increasing proportion of the total effort is being expended in co-operation with provincial authorities and industry.

Research in silviculture and management has been concentrated on problems of regeneration, on growth and stand development, and on harvest cutting methods. A regeneration survey extending from the Rocky Mountains to the Atlantic Coast has provided information on the state of regeneration on cut-over and burned lands. This has been followed by intensive work of a more fundamental nature to assess the factors responsible for the success or failure of regeneration and tests of practical cutting methods, seed-bed treatments, and seeding and planting methods. Studies are made of the growth, yield and successional changes in the most important forest types. Systems of classifying forest sites are being devised to assess their effective growth, development and long-term productivity. Research in tree breeding is being carried on for artificial propagation by selection and development of superior strains. In forest management, research is concerned with the application of silviculture, regulation of cut, and protection in order to maintain forests at the highest production levels. Many of the studies in silviculture and forest management are conducted co-operatively with provincial forest services and wood-using industries.

Forest fire protection is a vital problem and is therefore a major concern of federal authorities. In forest fire research the Federal Forestry Branch is working towards full co-operation with the provincial forest services in achieving the best methods of forest fire protection. The leading contributions of the Branch have been in the field of fire danger measurement and in the development of equipment and techniques for fire fighting. Some of the more important studies being undertaken at present include the development of fuel-type classification methods and mapping techniques, the development of a method for rating fire season severity and fire protection organization efficiency, and the testing of fire-suppression equipment, such as back-pack tanks and hose.

Research in forest inventory methods is of increasing importance because of the greatly expanded inventory programs being conducted in most provinces. Data from air photographs are correlated with field work to develop new techniques of timber estimating, which is being facilitated by the use of stand volume tables. Various methods of field sampling are being investigated and compared. Research is continuing in methods for measuring tree images and tree shadows to determine heights, crown widths, canopy density and other data from photographs taken in different seasons of the year under various conditions. The use of large-scale photography of sample areas is also being investigated and studies are being made in the identification of species and sub-types. Construction of suitable photogrammetric and other scientific apparatus includes those required by the forestry tricamera method of air photography which has been developed to provide maximum forestry information at minimum cost, and the shadow height calculator, which facilitates the determination of tree heights from shadows in air photographs.

Research in forest economics is concentrated on problems associated with the production of wood in the forest, land use, land tenure, taxation, forest legislation and administrative techniques, forest, management, forest labour and the valuation of forest lands. Economics research also involves continued study of the broad developments in forest industries. Further information on research is given in a special article on The Forest Products Laboratories of Canada in the 1955 Year Book, pp. 455-461.

Subsection 2.—Provincial Forestry Programs

All forested land in provincial territory, with the exception of the minor portions in National Parks, forest experiment stations, military areas and Indian reserves (*see* Table 2, p. 19), is administered by the respective provincial governments. The forestry program of each province is outlined below.

Newfoundland.—Of the estimated 30,505 sq. miles of productive forests in Newfoundland, 12,758 sq. miles lie on the Island and the remainder in Labrador. Most of Labrador's forests are leased but as yet virtually untouched although there is enough timber for the establishment of several large paper mills. Because of this lack of development the area is supervised by one Forest Inspector and a Forest Warden.

On the Island 63 p.c. of the forested area, mostly in the interior, is owned by, or leased to, two large paper companies. Of the remainder, 32 p.c. is unoccupied Crown land and 5 p.c. private holdings. A belt of coastal timber about three miles wide is retained to supply domestic firewood and construction material and each household has the right to cut 2,000 cu. feet of such wood each year. In most districts this form of cutting is done without restrictions but a policy is now being introduced whereby cutting in certain management areas will be controlled by forest officers.

Commercial timber cutting on unoccupied Crown lands has been by permit since 1952; for amounts up to 120 cords per person permits are issued by the field staff but for larger quantities permits must be approved by the Lieutenant-Governor in Council. The number of large permits varies from 10 to 25 each year and usually cover stands damaged by gales, fire or insects. Unoccupied Crown land is divided into 21 Forest Inspector Districts of varying size, averaging 281 sq. miles. The Island is also divided into three Forest Regions each with a Supervisor who is in charge of Inspectors and is responsible to the Minister of Mines and Resources and the Forestry headquarters staff.

Fire prevention is difficult because of a lack of roads into the remote forests. Twenty well-equipped forest fire depots are scattered along the coast, most of them equipped with radio telephone. Twelve lookout towers, ten of which are equipped with radiotelephone, cover a large portion of the forested area. One aircraft, stationed at Gander throughout the fire season, patrols isolated forests and transports fire fighting equipment and crews when necessary. The total forest fire staff, including permanent Inspectors and others, is approximately 90. The two paper companies maintain their own fire protection organization.

The Newfoundland Royal Commission on Forestry, appointed in 1954, recommended development of the pulp and paper industry; completion of a forest inventory; establishment of forest protection administration; and organization of a forest service.

Forest research for Newfoundland is performed by the Forestry Branch of the Federal Department of Northern Affairs and National Resources but very little reforestation is done, as yet.

Prince Edward Island.—The Forestry Division of Prince Edward Island, formed under the Department of Industry and Natural Resources in 1951, became part of the Department of Agriculture in 1955.

Almost all of Prince Edward Island's woodland is privately owned, so that the Forestry Division is mainly concerned with planting, woodlot management and fire protection. A small nursery has been established jointly with the Federal Government to deal with the Island's needs and many people take advantage of seedlings, supplied by this Division at reasonable cost, to restock barren areas. The Federal Government pays half the cost of reforesting waste lands.

In proportion to its size, Prince Edward Island exports a great deal of pulpwood. This export, combined with the fuelwood and lumber cut each year, led the Forestry Division to inaugurate a woodlot management program which is designed to educate the owner in the proper care and management of his woodlot.

Fire protection does not constitute too great a problem. Wooded areas are scattered in patches throughout the Province and since a network of roads makes all woodlots accessible, equipment can be brought to the scene of a fire quickly and easily.

Research is limited mainly to reforestation problems and these are studied in the provincial nursery.

Nova Scotia.—Forest administration in Nova Scotia is conducted by the Department of Lands and Forests which, in conjunction with the forest industry and the public, tries to protect and rejuvenate provincial forests. The Department employs 20 trained foresters, one wildlife biologist and an entomologist in addition to a large staff of rangers, surveyors and fieldmen.

Of the Province's 20,743 sq. miles, about 11,555 are classed as forested. The Crown holds title to about one-quarter of this total; one-third is in holdings of 1,000 acres or more owned by about 200 companies and individual land owners; one-thirtieth is in the form of National Parks and Indian reserves; and the remainder is composed of small woodlots which for the most part are owned by farmers.

Considerable effort is expended on conservation projects, forest protection and research. Reforestation has been practised and encouraged since 1926. Large quantities of seedlings are planted each year on Crown lands and distributed to companies and individuals for private reforestation. In addition, a restriction is placed on cutting coniferous trees of a diameter of less than ten inches through the stump. The careful maintenance of many farm woodlots has resulted in a continuing source of income to rural families and has helped to retain forest cover. To establish an inventory of forest resources, the Province has conducted an aerial and ground assessment to determine tree species and land productivity.

As a deterrent to wasteful procedures, Crown lands are no longer leased for timber cutting over long periods; instead, harvesting rights on approved areas are sold by tender and restrictions placed on cutting at that time. Provincial roads are being built into these areas making them accessible for management, harvesting and fire protection.

Fire fighting costs and damage to forests have in recent years averaged \$150,000 annually. In an effort to reduce this damage, the Province operates 17 fire ranger towers; five are operated by private companies and two by the Federal Government. An aerial patrol supplements these tower stations and three stand-by fire fighting crews are maintained in addition to regular fire ranger establishments in each county of the Province. Fire fighters are well equipped with portable tools, jeeps, trucks and bulldozers. Radio contact between ground, aircraft and automobile stations provides efficient relay during the fire season.

Forest research in Nova Scotia is conducted by services of the Federal Government and the Nova Scotia Research Foundation. Investigations are being made with a view to improving stand conditions and methods of cutting and processing so as to yield a better product and better returns. Efforts are being made to hasten the development of more valuable species on land now covered with poor quality hardwood and on developing better quality softwoods. A study of production costs is expected to reveal, and eventually reduce, the hidden costs of the industry. Other projects include research on regeneration, tree diseases, insects and tree physiology.

The greatest field of endeavour in forest preservation is to educate the public to appreciate the value of forest wealth. Each of the 14 district offices promotes this ideal by means of speeches to organized bodies, motion pictures, exhibits, bulletins and leaflets.

New Brunswick.—More than 80 p.c. of the area of New Brunswick is classed as productive forest of which the Crown, in right of the Province, owns about half. About 2 p.c. is owned by the Federal Government and the remainder is privately owned. A provincial inventory, part of the national forest inventory, was begun in 1951 and the results, to be published in 1958, will indicate the nature and extent of the forests of the Province. The New Brunswick Forest Development Commission, which has been studying methods of forest administration, will present its report late in 1957.

Protection from forest fires, the first requirement for forest conservation, is mainly the responsibility of the Forest Service which also carries out duties in connection with game protection, colonization and the administration of provincial Crown lands. A large-scale aerial spraying program to protect balsam fir and spruce from the spruce budworm has been carried on since 1952 by a Crown company sponsored by the Federal and Provincial Governments and representatives of the forest products industries.

Timber licences issued by the Province authorize operators to cut and remove forest products in accordance with forest management plans and cutting permits. Stumpage dues are paid to the Province when products are cut by the licensees.

New Brunswick does not maintain a provincial forest research organization. There is, however, extensive co-operation between the Province and the Federal Forestry Branch in conducting forest research. The University of New Brunswick also has undertaken a small number of forest research projects in co-operation with the National Research Council, the Provincial Government, and other interested institutions.

Quebec.—The commercial forests of the Province of Quebec cover an area of 220,772 sq. miles extending from its southern borders to latitude 52° north, between the frontier of Labrador in the east, and the Eastmain River Basin in the west. Of this total 25,704 sq. miles are privately owned, 296 sq. miles are federal Crown forests and the remainder is provincial Crown land. Approximately 134,000 sq. miles of the latter are vacant lands. Of the 1,000,000,000 cu. feet cut in the forests of Quebec in 1955-56, privately owned forests accounted for about two-fifths.

The limits reserved for forest industries are administered by the Department of Lands and Forests and the technical work such as inventory, reforestation, superintendence of cutting, control of culling, verification of plans for development, collecting of stumpage dues, etc., is the responsibility of the Forestry Service. These limits are either leased by auction after public notice has been given, or assigned under a special law. The price of the licence is fixed by auction or by Order in Council subsequent to specific legislation. The Government reserves the right to dispose of the water powers situated on the limits leased.

A tree-felling permit, which is valid for one year, is renewable if the holder has complied with the conditions imposed; it may be transferred with the authorization of the Minister of Lands and Forests. The lessee of a limit must pay a ground rent in addition to the price of licence and must forward, three months before the cutting begins, a plan of the operations. Wood cut must be measured by a licensed culler and at the end of the operations the limit-holder must produce a sworn statement of quantities cut.

The Forest Service endeavours to promote the use of silvicultural methods among the owners of wooded farm lots and small forest areas.

Quebec's forest protective system comprises three organizations: the Protective Service, the protective associations and the non-affiliated lease holders or owners. The Protective Service is a government body established within the Department of Lands and Forests in 1924 to enforce legislation and regulations governing forest fire protection and to protect vacant Crown lands, township reserves and colonization territories.

The protective associations, of which there are six, are syndicates of lease holders and owners who have availed themselves of their right to form an association to satisfy the law which compels them to protect their limits or private forests of 2,000 acres or over. Members assume operating expenses in proportion to the area owned by each but the Department assumes half the costs of fire fighting incurred by the associations.

The third group is composed of lease holders and of owners who prefer to discharge their obligations personally as far as forest protection is concerned. They enjoy the same privileges and their obligations are the same as those imposed upon the associations.

To perpetuate the forestry program of the Province, the Department has established a number of nurseries, the first at Berthierville in 1908. This nursery has three sections: one wooded with a variety of valuable species of mature age, one serving agricultural purposes, and another devoted to forestry experiments and the cultivation of trees for reforestation or ornamentation.

More recently the Grandes Piles nursery and the Gaspé nursery were organized and nurseries in the following counties: Abitibi-East, Témiscamingue, Saguenay, Îles-de-la-Madeleine, Rimouski, Roberval, Rivière-du-Loup, Témiscouata and Chicoutimi. Their object is the preparation of plants for reforesting nearby districts. 'Floating' nurseries supervised by the engineers of the Forestry Information Bureau and intended especially for growing reforestation plants for private properties, are located at Pont-Rouge, Sherbrooke, Scott, St. Hyacinthe, Victoriaville and Mont-Joli. The plants are supplied free of charge on request. A dynamic reforestation program is now under way in the Province, with an ultimate objective of 10,000,000 plants yearly on private grounds.

The Bureau of Silviculture and Botany, and the Forestry Products Laboratory, both subsidized by the Department, are actively engaged in scientific research work in the forestry field. The Bureau studies the possibilities of utilizing spoil-heaps of gold and asbestos mines, tests the fertility of soils in the spruce groves, classifies forests according to type of vegetation, and studies growth and yields of stands in the timber limits by means of permanent research spots. The Forestry Products Laboratory, located at the Duchesnay Forestry Station, examines developments in the field of chemical conversion of wood and in the use of forestry by-products.

Ontario.—Provincial policy is directed toward the management and protection of timber lands and stabilization of the forest industry. There are 123 management units, of which 36 are large timber licences and those licensees with holdings of more than 50 sq. miles must submit management plans and inventories for their areas. Smaller management areas are integrated into 'public' working circles.

Timber cutting rights are offered for sale with priority being given to the needs of established industries. When a management plan is approved, the licensee provides a plan covering proposed operations for the ensuing year and, additionally, the Minister may require that adequate provisions be made for effective reforestation of licensed areas.

In co-operation with the Federal Government the Province has undertaken an inventory of forest resources. Field work which started in 1946 has been completed and only the final compiling and publication of reports covering Lake Simcoe, Lake Huron and Lake Erie districts remain to be done. These reports cover the agricultural area woodlots of southern Ontario and are important because farm woodlots have a little-realized capacity. For instance, in the Lake Simcoe district alone there were, in 1956, 603 factories manufacturing wood products with a selling value of \$90,000,000 and employing 9,300 persons with earnings of almost \$26,000,000. Other predominantly agricultural districts have timber resources of equal value.

An extensive reforestation program is gaining momentum each year. In 1956 almost 30,000,000 trees were planted, of which 13,000,000 were placed on Crown lands, 4,000,000 on lands managed by counties, townships and conservation authorities, and the remainder distributed to private landowners. Provincial forestry officials plan to increase the scope of reforestation each year until 100,000,000 trees are planted annually. To achieve this objective, tree nursery facilities have been extended. Four established nurseries have been enlarged and five new nurseries organized.

In addition to the reforestation and regeneration of barren lands, the forest production and maintenance program includes measures to combat damage by fire, insects and disease. To fight fire the Forest Protection Division has an efficient staff well supplied with modern equipment. Over 300 lookout towers supplemented by aerial patrols and an extensive communication system guard against forest fires. During 1956, a moderate year, there were 1,017 forest fires which destroyed \$2,870,000 of merchantable timber on Crown lands alone. The cost of fighting these fires was over \$1,175,000. Despite a growing public awareness of fire hazards in the forest, over 700 of the fires were caused by human carelessness.

The Division of Research, as a result of constant study of the factors affecting regeneration of the commercially important tree species, has achieved noteworthy results. Silvicultural treatment of yellow birch has improved germination, survival and height growth. In the white pine program, a new method of grafting has been successful, and an improved method of raising aspen seedlings has been found. Advances have also been evident in soil research and general forest genetics as well as in the development of new fire fighting techniques.

Manitoba.—The forests of Manitoba are administered by the Forest Service, a Branch of the Department of Mines and Natural Resources. The Service is headed by a Provincial Forester and the Province is divided into four Forest Districts—Northern, Southern, Eastern, and Western—each with a District Forester in charge. The Whiteshell Forest Reserve, which is an important recreational area, is also supervised by a Forester. Each Forest District is subdivided into Forest Ranger Districts of which there are 40, each in charge of a Forest Ranger.

The cutting of mature timber is governed by timber sale, licensed timber berth, pulpwood lease, or timber permit. Timber sales are disposed of by public auction and cover periods of from one to seven years. Timber berths cover certain areas granted before 1930, the date of the transfer of the natural resources from the Federal Government to the Province. Pulpwood leases are granted over an area of 2,748 sq. miles. Timber permits are granted to settlers and small operators at regulation rates for a period of one year or less.

An inventory of the forest resources of the Province was completed in 1956 as part of the conservation plan. On the basis of this inventory and other information, working plans with annual allowable cuts on a sustained-yield basis have been brought into operation in the more accessible areas.

Fire protection, as another part of the conservation plan, is one of the most important activities of the Forest Service. Fires are detected by air patrol, lookout tower and road patrol and rapid communication is maintained within the Service by radio and telephone. The Air Service also transports men and equipment to fires in areas beyond the reach of roads. While the main air base is at Lac du Bonnet, summer air bases are maintained at The Pas, Norway House, and Thicket Portage. The total area under fire protection is about 97,000 sq. miles.

Regeneration of the forest is mainly dependent on natural means although 2,800,000 trees were planted during the past five years as part of the Federal-Provincial Agreement. The Pineland Forest Nursery is operated at a point near Hadashville to supply planting stock for denuded areas of Crown land and to furnish farmers with shelterbelt and woodlot seedlings.

The Province has no forestry research organization but co-operates with several Federal services which maintain two research areas.

Saskatchewan.—The forest area in Saskatchewan, excluding water, is 120,345 sq. miles or 54.7 p.c. of the land area of the Province. The provincial forests, which account for 92 p.c. of the total forest land, are administered by the Forestry Branch of the Department of Natural Resources under the Forest Act of 1931. It is the responsibility of the Forestry Branch to devise policy that will regulate all phases of forest activity so that the people of Saskatchewan may benefit from this resource in perpetuity. Cutting timber on Crown land is the exclusive right of a Crown corporation. The annual cut in each region is limited to 5 p.c. of the estimated stand of merchantable spruce.

The policy determined by the five divisions of the Forestry Branch—Administration, Inventory, Management, Silviculture and Research—is carried out on a regional basis under the supervision of a regional superintendent who is directly responsible to the Regional Administration Branch of the Department of Natural Resources. This Branch implements the policies conceived by program branches such as the Forestry Branch. It is, however, the responsibility of the Forestry Branch to provide liaison between the Administration and the regions for implementation of new forest practices and procedures and to assess their results.

The Department of Natural Resources Conservation Branch distributes information covering all aspects of the Department's resources management programs. A large part of the Branch's work, particularly during the summer, is devoted to publicizing the activities of the Province's forest management program. The Conservation Branch operates film and lecture tours, distributes pamphlets and provides training and assistance for field staff to make everyone aware of the great value of the provincial forests and of the need for their wise use and protection.

The detection, suppression and prevention of forest fires is the responsibility of the Fire Control Division of the Regional Administration Branch of the Department. The Division maintains a network of 80 lookout towers equipped with two-way radios. In periods of high hazard, four aircraft are kept on constant patrol over areas not under tower surveillance.

To aid conservation, the great expanse of forest area has been divided into smaller, more accessible units and a system of roads and fireguards has been developed. This facilitates movement of fire fighting personnel and allows the caching of fire fighting tools at strategic locations in the forests as well as at conservation officers' headquarters. Stand-by crews are ready to move quickly and heavy equipment is available when needed. Saskatchewan has taken an interesting step in the field of fire suppression by establishing a 'smokejumper' organization. This group of 16 fire fighters, organized in 1948, is maintained primarily to parachute on fires in remote areas and to combat the blaze until other personnel can reach it.

The Department of Natural Resources, although it does not maintain a staff of forest biologists, co-operates fully with Federal authorities in investigating and controlling forest damage resulting from insects and disease.

A new research division has been organized to investigate various subjects and to establish new procedures and policies regarding forest practices. The Division is currently conducting cull studies in pulpwood stands, black and white spruce regeneration studies, and the assessment of results obtained from the mechanical thinning of jack pine stands.

Alberta.—The 151,278 sq. miles of provincial forests are administered by the Forests and Wildlife Division of the Department of Lands and Forests in Edmonton. The Division is composed of five forestry Branches under a Director of Forestry: Administration, Forest Protection, Forest Management, Forest Surveys, and Radio. A sixth Branch deals with fish and game regulations.

The Administration Branch supervises all branches, maintaining general control over revenue and expenditures, and dealing with personnel. It conducts a Forestry Training School which offers in-service training for Forest Officers and other employees.

Protection of the forests is the charge of the Forest Protection Branch and all field personnel. For ease of administration, the forested area has been divided into seven Divisions, each responsible for the forest within its boundary. These Divisions are in turn composed of Ranger Districts in which all activities are supervised by the district forest officer responsible to his divisional superintendent. The divisional staffs include an assistant superintendent, chief ranger, radio operator and seasonal help such as lookouts, stand-by fire fighting crews and labourers. These employees are responsible for fire prevention, detection and suppression as well as the supervision of logging and milling operations, timber cruising, and construction and maintenance of forestry projects.

Timber matters are dealt with by the Forest Management Branch. These include setting the standard of timber utilization, supervising the cruising and selling of timber, setting and supervising methods of cutting, ensuring efficient operation of mills, collection of Crown dues, and implementation of forest management plans. Much of the field work in connection with these duties is accomplished through the divisional staffs.

The Forest Surveys Branch is the technical forestry branch whose main charges include forest management planning, the forest inventory, and forest cover map-making for timber sale and fire damage evaluation purposes. Temporary cutting control plans have been completed for those areas south of the 57th parallel, and management plans are being prepared for the Slave Lake region. All timber will eventually be disposed of according to management plan under a system of sustained yield.

Development and maintenance of communications is the function of the Radio Branch. Central stations are maintained at Edmonton and Calgary with smaller stations located at divisional headquarters, lookout towers and Ranger Districts.

Conservation of 9,000 sq. miles of forest comprising the Rocky Mountains Forest Reserve is administered by a joint provincial-federal agency, the Eastern Rockies Forest Conservation Board with offices in Calgary. The area is composed of three 'forests' which are subdivided into Ranger Districts. The Superintendent in charge of each forest is responsible to the administrative officer in Calgary whose decisions are based on policies formed by the Board which comprises one federal and two provincial members. This Reserve is important as it includes the headwaters of the main prairie river system.

Research in general is carried out by the Forestry Branch of the Federal Department of Northern Affairs and National Resources (which maintains the Kananaskis Experiment Station) and by the Science Service of the Federal Department of Agriculture.

British Columbia.—The productive forest land of British Columbia in 1956 was inventoried at 123,176 sq. miles and in addition there were 18,538 sq. miles of forest land classed as "not satisfactorily restocked". Immature timber occurred on 59,848 sq. miles and 63,328 sq. miles carried matured timber with a total volume of 133,000,000,000 cu. feet.

Of the 123,176 sq. miles, 113,836 are owned by the Province, 8,563 are under private ownership and 777 sq. miles belong to the Government of Canada in National Parks and other tenures.

For administrative purposes, the Province is divided into five Forest Districts with regional headquarters at Vancouver, Prince Rupert, Prince George, Kamloops and Nelson. Further decentralization of authority is effected by subdivision of the Forest Districts into Ranger Districts. There are approximately 25 Ranger Districts in each Forest District. Twelve directional, servicing, or policy-forming divisions constitute the head office of the Forest Service in Victoria.

Vigorous efforts are being made to bring British Columbia's forest resources under sustained-yield management and the forest industries are making definite progress toward total utilization of their raw materials. The problem is urgent despite the fact that, with a present annual cut of approximately 1,100,000,000 cu. feet, the total inventory would appear sufficient to support present needs in perpetuity. Over half of the present cut comes from the Coast (Wet Belt) forests which also comprise the majority of the 12,321 sq. miles privately owned, leased or licensed. This area is being overcut at the present time, whereas large areas of northern forest land remain untouched.

Several systems of timber disposal are in effect. The most publicized is the Forest Management Licence which constitutes a contract between the Government and a company or individual whereby the latter agrees to manage, protect, and harvest an area of forest land for the best possible return, in exchange for the right to the timber crop on the area in perpetuity. Provincial Forests, Public Working Circles, and Sustained Yield Units are the governmental equivalent of the Management Licence with the timber, when it is ready for cutting, being disposed of by public auction. Management, silviculture, road-building and protection on such areas are the responsibility of the Forest Service. Other tenures of lesser importance are Tree Farms, Farm Woodlot Licences, and Timber Sales.

Protection of the forest, particularly from fire, is still a major problem although the public is becoming more cautious. Improved fire fighting techniques, the use of aircraft for patrol and transportation, employment of helicopters, and a gradually expanding system of lookouts are steadily cutting down fire losses. Close liaison with the Science Service of the Federal Department of Agriculture, which maintains laboratories in Vernon and Victoria, provides information about insect and fungal enemies of the forest.

British Columbia's present research policy is to establish regional centres in association with District Headquarters. Close association is maintained with the District Forester and his staff although the regional research centres are supervised directly from Victoria. Since each Forest District is mainly concerned with one of the major forest regions characterizing the Province, the regional research program within a District gives priority to studies in forest types dominant in that Forest District.

The policy of the Research Division is to undertake investigations as required by the British Columbia Forest Service in its administration and management of the forest resources of the Province. More specifically, the research policy may be briefly defined as follows:—

(1) Investigation of silvicultural problems arising from the utilization of forest resources. These existing problems are recognized in specific forest types or regions and are a cause of present concern.

(2) Studies in anticipation of silvicultural problems, or in anticipation of a demand for specific silvicultural information, the need for which can be predicted from the general trend of intensive forest practice, and which require long-term investigations.

(3) Short-term investigations, generally of an expedient nature, dealing with silvicultural or management problems, for other Forest Service divisions or districts.

(4) Sustained studies for other Forest Service divisions in fields other than silviculture.

(5) Demonstration on a practical scale of the application of research findings for the benefit of government, industrial and private foresters, such demonstrations to be on experiment stations or other Crown lands reserved for the purpose.

The British Columbia Research Council has performed some short-range studies of specific problems, as has the University of British Columbia.

Section 6.—Forest and Allied Industries

This Section is concerned with the many industries employed in the felling of timber in the forest and its transformation into the numerous utilitarian shapes and forms required in modern living. The basic industries provide the raw material for sawmills, pulp and paper mills and for a wide range of secondary industries that convert the products of the basic industries into more highly manufactured goods such as veneers and plywoods, sash and doors, furniture, and a vast range of industries using wood in any form in their processes. These industries, especially the pulp and paper industry and the lumber industry, contribute substantially to the value of the export trade of Canada and thereby provide the exchange necessary to pay for a large share of the imports purchased from other countries, particularly the United States.

Subsection 1.—Woods Operations

In connection with operations in the woods the forests provide not only the raw materials for the sawmills, pulp mills, veneer mills, wood distillation, excelsior and other plants, but also the logs, pulpwood and bolts for export in the unmanufactured state, and fuel, poles, railway ties, posts and fence rails, mining timber, piling and other primary products that are finished in the woods ready for use or export. A number of minor forest products help swell the total, such as Christmas trees, cascara bark, balsam gum, resin, etc.

It has been estimated that operations in the woods during the logging season in 1955 gave employment amounting to 149,300 man-years and distributed \$506,000,000 in wages and salaries.

Estimates of woods operations are now calculated on an entirely new basis, and previous annual estimates have been revised as far back as 1940. The former method used the formula 'Consumption plus Exports minus Imports equals *apparent* Production' for both volume and value of each class of primary forest products. The new method attempts to give *actual* production figures for all items and is based chiefly on provincial Forest Service data for volume. Value, as presently estimated, excludes transportation costs, which formed a large part of the consumption values utilized in former calculations.

7.—Value of Woods Operations by Product 1951-55

NOTE.—The figures in this table have been calculated on a new basis and are not comparable with those published in the corresponding table of previous Year Books (*see text above*).

Product	1951	1952	1953	1954	1955
	\$	\$	\$	\$	\$
Logs and bolts for sawing.....	339,423,424	344,932,434	331,296,157	345,067,657	393,860,833
Logs for pulping.....	29,153,333	28,810,263	28,748,017	33,359,100	38,985,790
Pulpwood ¹	387,042,948	317,991,822	280,263,133	290,441,378	330,490,498
Fuelwood.....	40,607,056	33,277,041	38,558,073	36,075,799	34,361,586
Poles and piling.....	10,092,662	15,497,539	10,705,142	9,833,897	17,082,451
Round mining timber.....	6,300,478	12,208,221	4,665,279	3,998,158	3,432,932
Fence posts.....	1,573,533	2,007,683	1,821,996	1,590,369	2,071,988
Hewn ties.....	821,541	1,160,020	890,604	468,485	627,082
Fence rails.....	231,870	274,113	246,165	243,611	248,359
Wood for distillation.....	380,102	441,538	361,523	442,381	470,947
Miscellaneous roundwood.....	320,298	518,482	411,788	301,501	308,275
Other products.....	5,074,621	6,069,598	6,581,011	6,547,571	7,631,973
Totals.....	\$21,021,875	763,188,754	704,538,888	728,369,907	829,572,714

¹ Roundwood only; wood residues used for pulping excluded.

8.—Production and Consumption of Wood Cut in Woods Operations 1940-55, and by Product 1954 and 1955

NOTE.—The figures in this table have been calculated on a new basis and are not comparable with those published in the corresponding table of previous Year Books (see text on p. 480). Provincial details by product and province for 1940-55 on the new basis will be found in DBS Bulletin, *Annual Estimate of Operations in the Woods, 1955*.

Year and Product	Production			Consumption		
	Quantity Reported or Estimated	Equivalent Volume of Merchantable Wood ¹	Total Value	Quantity Reported or Estimated	Equivalent Volume of Merchantable Wood ¹	Total Value
		M cu. ft.	\$		M cu. ft.	\$
1940.....	...	2,664,365	202,083,298	...	2,492,912	168,274,952
1941.....	...	2,711,588	225,615,876	...	2,520,394	195,233,892
1942.....	...	2,625,305	249,509,627	...	2,535,514	222,056,222
1943.....	...	2,571,335	279,828,148	...	2,314,206	237,199,405
1944.....	...	2,650,208	330,819,722	...	2,305,324	263,473,033
1945.....	...	2,692,200	364,237,406	...	2,280,028	294,169,952
1946.....	...	2,821,935	435,706,186	...	2,430,609	359,840,731
1947.....	...	3,104,214	559,821,333	...	2,603,181	461,009,040
1948.....	...	3,069,265	579,014,983	...	2,631,388	513,622,093
1949.....	...	2,685,917	491,987,414	...	2,607,465	503,320,008
1950.....	...	3,023,465	613,045,910	...	2,761,909	558,104,116
1951.....	...	3,436,463	821,021,875	...	2,922,883	698,113,030
1952.....	...	3,205,383	763,183,754	...	2,834,719	705,980,443
1953.....	...	3,078,066	704,538,888	...	2,903,661	705,452,273
1954.....	...	3,122,313	728,369,907	...	2,924,832	693,755,990
Logs and bolts for sawing.....M ft. b.m.	7,861,825	1,492,233	345,067,657	7,674,597	1,462,176	299,999,556
Logs for pulping....."	756,097	132,317	33,359,100	2	2	2
Pulpwood.....cord	13,182,901	1,120,546	290,441,378	12,981,008	1,103,386	332,853,603
Fuelwood....."	3,918,258	313,461	36,075,799	3,904,584	312,367	35,958,001
Poles and piling.....No.	1,333,746	20,006	9,833,897	1,109,457	16,642	17,175,346
Round mining timber.....cord	246,943	23,460	3,998,158	126,661	12,033	2,343,228
Fence posts.....No.	9,133,113	11,019	1,590,369	7,545,249	9,054	1,310,333
Hewn ties....."	325,402	1,627	468,485	305,906	1,530	433,203
Fence rails....."	1,962,638	1,963	243,611	1,962,648	1,963	245,907
Wood for distillation.....cord	37,373	2,990	442,381	37,373	2,990	442,381
Miscellaneous roundwood.....cu. ft.	2,691,000	2,691	301,501	2,691,000	2,691	301,501
Other products ².....\$	...	...	6,547,571	...	...	2,687,931
1955.....	...	3,280,070	829,572,714	...	3,093,255	746,954,672
Logs and bolts for sawing.....M ft. b.m.	8,194,023	1,563,135	393,860,833	8,385,763	1,598,202	345,000,352
Logs for pulping....."	874,513	153,040	38,985,790	2	2	2
Pulpwood.....cord	14,287,481	1,214,436	330,490,498	13,629,413	1,158,500	340,076,962
Fuelwood....."	3,623,887	269,872	34,361,586	3,610,099	288,808	34,219,666
Poles and piling.....No.	1,345,258	20,161	17,082,451	1,195,057	17,926	19,716,100
Round mining timber.....cord	199,412	18,943	3,432,932	127,500	12,112	2,358,750
Fence posts.....No.	8,922,355	10,709	2,071,988	7,193,627	8,632	1,248,535
Hewn ties....."	371,135	1,855	627,082	235,168	1,176	364,289
Fence rails....."	1,714,187	1,714	248,359	1,714,187	1,714	251,134
Wood for distillation.....cord	34,626	2,770	370,947	34,626	2,770	370,947
Miscellaneous roundwood.....cu. ft.	3,415,000	3,415	408,275	3,415,000	3,415	408,275
Other products ².....\$	...	...	7,631,973	...	...	2,939,062

¹ In estimating the annual drain on Canada's forest resources, certain converting factors have been used, each of which represents in cubic feet the quantity of merchantable wood used to produce one unit of the material in question. The factor for logs and bolts for the British Columbia coastal region is 175 and for the remainder of Canada 200. Other factors: pulpwood 85, fuelwood and wood for distillation 80, poles and piling 15, round mining timber 95, hewn railway ties 5, fence posts 1.2 and fence rails 1. ² Converted to rough cords and included with pulpwood.

³ Chiefly Christmas trees but also includes balsam gum, cascara bark, etc.

9.—Equivalent Volume of Solid Wood Cut and Value of Products of Woods Operations by Province 1953-55

NOTE.—The figures in this table have been calculated on a new basis and are not comparable with those published in the corresponding table of previous issues of the Year Book (see text on p. 480).

Province or Territory	Equivalent Volume of Solid Wood			Value of Products ¹		
	1953	1954	1955	1953	1954	1955
	M cu. ft.	M cu. ft.	M cu. ft.	\$	\$	\$
Newfoundland.....	113,890	99,880	112,392	28,402,444	24,251,832	28,049,693
Prince Edward Island..	9,988	9,052	11,259	1,548,392	1,429,633	1,957,548
Nova Scotia.....	108,096	101,422	118,588	21,756,883	20,725,058	24,745,766
New Brunswick.....	190,978	175,948	202,645	45,214,437	40,593,071	45,929,729
Quebec.....	941,450	1,004,188	984,111	227,838,771	239,719,810	249,500,953
Ontario.....	504,179	497,261	542,031	122,224,164	122,759,430	144,476,972
Manitoba.....	60,392	62,035	56,646	9,096,576	9,940,925	9,486,023
Saskatchewan.....	71,680	65,326	55,225	7,591,213	8,010,511	7,496,533
Alberta.....	107,616	107,237	113,511	12,720,628	14,871,081	16,801,055
British Columbia.....	965,368	996,064	1,080,758	227,451,969	245,400,223	300,614,307
Yukon and N.W.T.....	4,428	3,900	2,904	693,411	668,333	514,135
Canada.....	3,078,065	3,122,313	3,280,070	704,538,888	728,369,907	829,572,714

¹ Includes value of forest products other than wood.

Subsection 2.—The Lumber Industry

The manufacture of sawn lumber is the second most important industry in Canada depending on the forest for its raw materials.

The total number of sawmills, tie, shingle, lath, veneer, stave, heading and hoop mills and mills for cutting-up and barking or rossing of pulpwood, reports of which were compiled for 1955, was 7,333 as compared with 7,696 in 1954. Mills sawing less than 15,000 ft. b.m. are excluded but account for less than one-half of one per cent of the total lumber production. Employees numbered 58,586 and wages and salaries amounted to \$152,556,819. Logs, bolts and other materials and supplies of the industry were valued at \$338,870,204, the gross value of production was \$644,482,990 and net value \$296,940,188.

Lumber production in Canada reached its maximum in 1955 at 7,920,033,000 ft. b.m. Average values were fairly uniform until 1916 but increased rapidly from 1917 to 1920 to decline gradually during the following years to the lowest level for the entire period in 1933. With the exception of 1938 and 1949 increases in average value took place each year from 1933 to 1951; decreases of 2.8 p.c., 4.7 p.c. and 1.5 p.c. occurred in 1952, 1953 and 1954, followed by an increase of 2.6 p.c. in 1955.

10.—Quantity and Value of Lumber Production and Value of All Sawmill Products by Province 1954 and 1955

Province or Territory	Lumber Production				Value of All Sawmill Products	
	Quantity		Value		1954	1955
	1954	1955	1954	1955	1954	1955
	M ft. b.m.	M ft. b.m.	\$	\$	\$	\$
Newfoundland.....	30,716	32,691	1,795,559	1,996,166	2,081,838	2,114,437
Prince Edward Island..	8,827	9,610	468,586	534,194	536,769	593,050
Nova Scotia.....	273,583	353,682	16,102,774	21,309,769	17,406,816	23,057,289
New Brunswick.....	227,365	275,186	14,325,913	17,867,953	17,509,665	20,751,935
Quebec.....	1,099,036	1,025,094	73,094,936	69,545,538	86,038,897	81,381,163
Ontario.....	721,742	759,976	55,511,696	58,654,467	69,286,415	69,872,231
Manitoba.....	44,963	46,627	2,705,720	2,694,833	3,163,501	3,680,222
Saskatchewan.....	85,663	75,233	4,641,824	4,125,631	4,865,045	4,339,875
Alberta.....	366,027	421,616	20,250,893	22,288,596	22,793,615	23,853,097
British Columbia.....	4,378,695	4,914,285	293,429,444	342,058,910	347,883,651	414,944,542
Yukon and N.W.T.	7,238	6,033	584,660	487,184	620,286	495,149
Canada.....	7,243,855	7,920,033	482,912,005	541,563,241	572,186,498	641,482,990

11.—Quantity and Value of Lumber Cut by Kind 1954 and 1955

Kind of Wood	Quantity		Value	
	1954	1955	1954	1955
	M ft. b.m.	M ft. b.m.	\$	\$
Spruce.....	2,204,914	2,550,070	132,345,070	153,821,722
Douglas fir.....	2,124,329	2,270,468	141,867,380	158,796,587
Hemlock.....	910,006	994,138	57,656,130	67,043,585
White pine.....	406,226	413,741	34,729,121	36,329,352
Cedar.....	479,921	523,382	42,151,851	47,714,814
Yellow birch.....	188,271	137,406	15,598,203	11,867,871
Jack pine.....	246,889	252,245	14,704,760	15,196,082
Maple.....	90,581	95,787	7,514,425	8,353,541
Balsam fir.....	193,267	223,841	11,364,979	13,597,112
Red pine.....	55,959	45,153	4,576,353	3,791,228
Other kinds.....	343,478	413,802	20,403,733	25,051,347
Totals.....	7,243,841	7,920,033	482,912,005	541,563,241

12.—Quantity and Value of Lumber, Shingles and Lath Produced 1947-55

NOTE.—Figures from 1908 are given in the corresponding table of previous Year Books, beginning with the 1931 edition.

Year	Lumber		Shingles		Lath	
	Quantity	Value	Quantity	Value	Quantity	Value
	M ft. b.m.	\$	Squares	\$	'000	\$
1947.....	5,877,901	322,048,356	3,107,248	24,449,305	151,151	1,239,824
1948.....	5,908,798	340,850,538	3,078,215	24,470,746	149,646	1,338,534
1949.....	5,915,443	334,789,873	2,825,261	19,568,633	129,895	1,136,208
1950.....	6,553,898	422,480,700	3,191,589	31,807,753	123,118	1,134,741
1951.....	6,948,697	507,650,241	2,982,362	27,977,418	104,872	1,042,196
1952.....	6,807,594	483,105,323	2,424,818	19,269,747	111,595	1,237,227
1953.....	7,305,958	494,385,993	2,610,068	19,897,777	155,595	1,686,581
1954.....	7,243,855	482,912,005	2,710,654	24,039,162	140,655	1,512,400
1955.....	7,920,033	541,563,241	2,896,080	29,795,687	149,663	1,613,497

Lumber Exports.—Exports of planks, boards and square timber are given in Chapter XXII, Foreign Trade.

Subsection 3.—The Pulp and Paper Industry

The manufacture of pulp and paper has been the leading industry in Canada for many years and the postwar development of the industry has more than kept pace with the vast industrial growth of the nation. Pulp and paper stands first among all industries in value of production, in exports, in total wages paid and in capital invested. It is the largest consumer of electric energy and the largest industrial buyer of goods and services, including transportation, in the land. The industry has a newsprint output about four times that of any other country and provides over 50 p.c. of the world's newsprint needs. Canada is one of the world's greatest woodpulp exporters and stands second only to the United States as a producer of pulp. Thus, this Canadian industry, with 80 p.c. of its output moving abroad, ranks as one of the major industrial enterprises of the world.

There are three classes of mills in the industry. In 1956, 31 were making pulp only, 25 were making paper only and 70 were combined pulp and paper mills.

The industry includes three forms of industrial activity: operations in the woods with pulpwood as a product, the manufacture of pulp, and the manufacture of paper. Some of the important pulp companies operate sawmills to utilize the larger timber on their limits to the best advantage, and some lumber manufacturers divert a portion of

their spruce and balsam logs to pulp mills. Less than 12 p.c. of the pulpwood cut in Canada is exported in raw or unmanufactured form and a large portion of such exports is cut from private lands.

13.—Production, Consumption, Exports and Imports of Pulpwood 1940-55

NOTE.—Table compiled on a new basis; figures not comparable with those published in the corresponding table of previous Year Books.

Year	Total Production of Pulpwood in Canada			Canadian Pulpwood Used in Canadian Pulp Mills		Canadian Pulpwood Exported Unmanufactured		Imported Pulpwood Used in Canada	
	Quantity ¹	Total Value	Average Value per Cord	Quantity ¹	P.C. of Total Production	Quantity ¹	P.C. of Total Production	Quantity ¹	P.C. of Total Consumption
	cords	\$	\$	cords		cords		cords	
1940.....	8,716,538	74,731,002	8.57	7,063,128	82.2	1,551,600	17.8	47,626	0.7
1941.....	8,396,961	74,878,637	8.92	7,740,444	77.9	1,856,414	22.1	81	—
1942.....	8,723,269	86,946,706	9.97	7,856,780	77.1	1,993,667	22.9	1,714	—
1943.....	8,987,181	104,183,817	11.59	7,423,966	82.8	1,545,986	17.2	2,379	—
1944.....	9,643,306	126,851,350	13.15	7,328,763	84.3	1,509,268	15.7	8,209	0.1
1945.....	10,973,083	159,270,381	14.51	7,655,766	84.6	1,684,421	15.4	4,133	—
1946.....	12,111,028	196,243,029	16.20	8,952,101	84.6	1,867,593	15.4	16,881	0.2
1947.....	13,657,107	249,911,951	18.30	9,701,078	85.3	2,001,477	14.7	50,508	0.5
1948.....	13,814,970	271,560,306	19.66	10,394,718	83.0	2,352,552	17.0	75,969	0.7
1949 ²	10,308,783	202,544,308	19.65	10,464,990	84.0	1,644,253	16.0	5,491	—
1950.....	13,424,358	280,837,687	20.92	11,406,688	86.7	1,782,134	13.3	28,220	0.2
1951.....	18,151,853	416,196,281	22.93	12,587,792	84.1	2,893,615	15.9	46,634	0.4
1952.....	14,755,089	346,802,085	23.50	11,960,014	82.9	2,529,353	17.1	31,060	0.3
1953.....	13,545,181	309,011,150	22.81	12,060,853	86.8	1,783,657	13.2	48,805	0.4
1954.....	14,739,571	323,800,478	21.97	12,875,978	87.6	1,826,193	12.4	105,030	0.8
1955.....	16,087,951	369,476,288	22.97	13,494,496	88.3	1,882,784	11.7	134,917	1.0

¹ Given in terms of rough or unpeeled wood.

² Newfoundland included from 1949.

Pulp Production.—The manufacture of pulp, the second stage in this industry, is carried on by mills producing pulp only and also by paper manufacturers operating pulp mills in conjunction with paper mills to provide their own raw material. Such mills usually manufacture a surplus of pulp for sale in Canada or for export. Spruce, supplemented by balsam fir in the east and by hemlock in the west, is the most suitable species for the production of all but the best classes of paper.

The preliminary preparation of pulpwood is frequently carried on at the pulp mill, but there are also a number of cutting-up and rossing mills operating on an independent basis, chiefly for the purpose of saving freight on material cut at a distance from the mill or on material intended for export. Pulpwood is measured by the cord (4' by 4' by 8' of piled material). One cord of rough pulpwood contains approximately 85 cu. feet of solid wood, and one cord of peeled pulpwood 95 cu. feet.

Of the total 1956 pulp production, 85 p.c. was made in combined pulp and paper mills by companies manufacturing paper. The remainder was made for sale in Canada or for export by mills making pulp only. Over 53 p.c. was groundwood pulp and over 17 p.c. unbleached sulphite fibre, these being the principal components of newsprint paper. Bleached sulphite, bleached, semi-bleached and unbleached sulphate, soda fibre, semi-chemical, other grades and groundwood and chemical screenings made up the remainder. A considerable market has developed for screenings in connection with the manufacture of rigid insulating boards.

The manufacture of 10,733,744 tons of pulp produced in 1956 entailed the use of 14,031,855 cords of rough pulpwood valued at \$369,263,045 and the equivalent of 936,370 rough cords of other wood (i.e., sawmill chips, slabs and edgings, sawdust, butts, cores, etc.) valued at \$18,882,759. The total value of materials used in the manufacture of pulp was \$464,347,142.

14.—Pulp Production, Mechanical and Chemical, 1947-56

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Mechanical Pulp		Chemical Fibre		Total Production ¹	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	\$	tons	\$	tons	\$
1947.....	4,275,269	147,423,552	2,755,977	251,273,372	7,253,671	403,853,235
1948.....	4,413,513	168,343,496	2,997,281	310,338,614	7,675,079	485,966,164
1949.....	4,718,806	166,591,741	2,891,418	272,355,430	7,852,998	445,138,494
1950.....	4,910,803	173,055,433	3,314,250	323,330,963	8,473,014	502,583,925
1951.....	5,172,465	213,953,064	3,814,086	503,997,803	9,314,849	727,890,005
1952.....	5,175,319	217,352,245	3,518,127	423,789,033	8,968,009	650,021,180
1953.....	5,122,597	209,899,639	3,663,289	406,114,975	9,077,063	624,865,504
1954.....	5,337,610	214,102,066	4,057,046	433,359,934	9,673,016	655,916,738
1955.....	5,466,925	218,557,773	4,359,226	465,149,732	10,150,547	693,402,831
1956.....	5,723,002	231,236,271	4,645,493	463,850,558	10,733,744	706,232,534

¹ Includes screenings and unspecified pulps.² Newfoundland included from 1949.**15.—Pulp Production by the Chief Producing Provinces 1947-56**

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Quebec		Ontario		Canada ¹	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	\$	tons	\$	tons	\$
1947.....	3,751,579	194,805,327	2,100,237	122,382,058	7,253,671	403,853,235
1948.....	3,902,072	227,425,545	2,226,124	153,870,832	7,675,079	485,966,164
1949.....	3,698,401	196,568,691	2,138,444	140,662,434	7,852,998 ²	445,138,494 ²
1950.....	3,922,543	216,299,900	2,297,518	156,390,753	8,473,014	502,583,925
1951.....	4,282,568	298,100,313	2,484,551	219,571,231	9,314,849	727,890,005
1952.....	4,192,047	280,314,341	2,308,722	182,773,000	8,968,009	650,021,180
1953.....	4,163,068	265,937,385	2,323,509	177,713,471	9,077,063	624,865,504
1954.....	4,315,465	268,759,418	2,420,903	183,381,040	9,673,016	655,916,738
1955.....	4,491,139	280,171,743	2,602,298	196,235,632	10,150,547	693,402,831
1956.....	4,809,011	296,884,619	2,735,241	178,012,929	10,733,744	706,232,534

¹ Includes production in British Columbia, Manitoba, New Brunswick and Nova Scotia.² Newfoundland included from 1949.

Pulp Exports.—The chief market for Canadian newsprint and pulp is the United States. Prior to World War II this market alone absorbed about 85 p.c. of the pulp exports and 80 p.c. of the newsprint exports. In 1945 the proportions were 76 p.c. and 83 p.c. respectively and in 1956, 81 p.c. and 87 p.c.

16.—Exports of Pulp to the United Kingdom, United States and All Countries 1947-56

Year	United Kingdom		United States		All Countries	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	\$	tons	\$	tons	\$
1947.....	136,976	14,741,287	1,499,302	156,121,526	1,698,712	177,802,612
1948.....	170,596	21,369,417	1,590,674	184,972,898	1,797,998	211,564,384
1949.....	181,828	20,137,715	1,305,334	141,641,380	1,557,348	171,504,163
1950.....	117,921	13,128,894	1,694,444	191,005,507	1,846,143	208,555,549
1951.....	217,250	37,770,627	1,831,410	276,760,578	2,243,307	365,132,884
1952.....	210,685	35,208,295	1,588,978	225,082,376	1,940,579	291,863,498
1953.....	214,951	38,099,255	1,599,491	202,247,663	1,950,152	248,674,880
1954.....	270,946	34,486,399	1,669,782	206,435,403	2,180,416	271,418,005
1955.....	280,575	34,814,098	1,868,804	233,796,779	2,366,133	297,304,069
1956.....	244,164	29,762,920	1,919,634	245,080,531	2,374,013	304,536,497

¹ Newfoundland included from 1949.

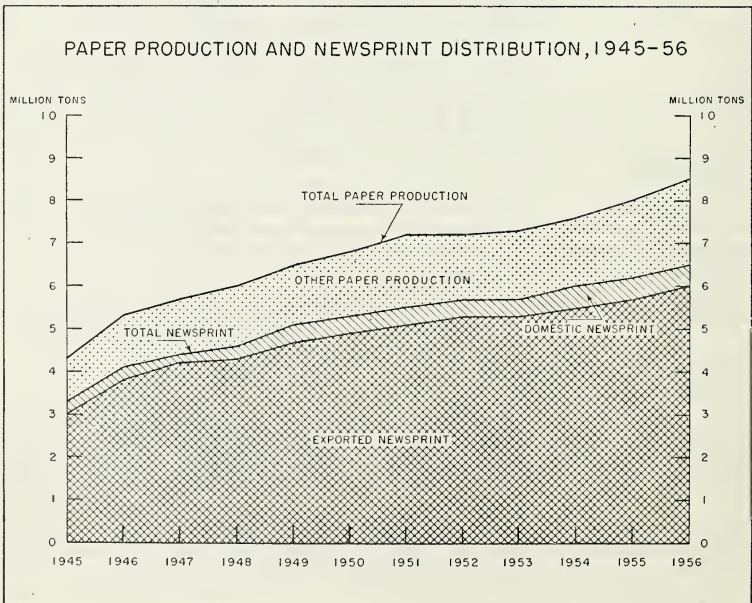
World Pulp Statistics.—Figures of production, exports and imports of pulp for certain countries of the world have again become available after the interruption caused by World War II and are shown for 1955 and 1956 in Table 17. It is estimated that these countries produce over four-fifths of the world supply of pulp.

17.—Production, Exports and Imports of Pulp by Leading Countries 1955 and 1956

(SOURCE: Canadian Pulp and Paper Association)

Country	1955			1956		
	Production	Exports	Imports	Production	Exports	Imports
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Canada ¹	10,145	2,367	59	10,742 ¹	2,375	65
United States.....	20,740	634	2,213	22,118	531	2,334
Finland.....	3,026	1,439	—	3,131	1,444	—
Norway.....	1,498	767	37	1,491	780	22
Sweden.....	4,744	2,538	1	4,970	2,807	1

¹ Figures differ slightly from DBS Tables 14 and 16, p. 485, because of different bases of calculation.



Paper Production.—During 1956 there were 95 establishments producing paper and paper board in Canada. In addition to newsprint Canadian mills have a highly developed production of fine paper, wrapping paper, tissues, paper board and other cellulose products.

18.—Paper Production by Type 1947-56

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Newsprint Paper		Book and Writing Paper		Wrapping Paper	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	\$	tons	\$	tons	\$
1947.....	4,474,264	355,540,669	210,762	39,727,187	188,742	26,009,996
1948.....	4,640,336	402,099,718	231,608	45,178,968	207,128	31,036,805
1949 ¹	5,187,206	467,976,343	199,317	40,598,820	195,585	30,033,478
1950.....	5,318,988	506,968,207	214,097	47,356,410	222,840	37,776,291
1951.....	5,561,115	564,361,193	253,081	63,790,259	257,332	49,664,005
1952.....	5,707,030	600,515,960	224,683	57,463,621	222,529	45,356,720
1953.....	5,755,471	633,408,019	246,513	61,451,545	238,111	49,028,911
1954.....	6,000,895	657,487,344	269,353	68,613,807	250,408	51,341,374
1955.....	6,196,319	688,338,369	301,352	74,904,349	263,915	53,998,859
1956.....	6,445,110	735,644,049	341,580	86,524,107	288,146	61,098,013
	Paper Boards		Tissue and Miscellaneous Paper		Totals	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	\$	tons	\$	tons	\$
1947.....	744,377	66,126,302	156,937	19,697,123	5,775,082	507,101,277
1948.....	817,432	80,864,700	167,142	23,166,651	6,063,646	582,346,842
1949 ¹	797,023	80,632,075	160,838	22,219,122	6,539,969	641,459,838
1950.....	876,894	92,531,711	179,216	25,521,207	6,812,035	710,153,826
1951.....	960,493	113,469,950	193,250	32,744,242	7,225,271	824,029,649
1952.....	874,582	106,066,622	172,976	28,702,185	7,201,800	838,105,108
1953.....	948,955	114,978,277	187,476	28,991,721	7,376,526	887,858,473
1954.....	940,196	117,172,691	188,755	30,975,427	7,649,607	925,590,643
1955.....	1,027,441	130,365,751	211,186	33,831,919	8,000,213	981,439,247
1956.....	1,173,087	147,967,340	218,862	39,258,846	8,466,785	1,070,492,355

¹ Newfoundland included from 1949.

Quebec produced over 48 p.c. of the total paper made in 1956, Ontario over 27 p.c., British Columbia about 9 p.c. and Nova Scotia, New Brunswick, Manitoba and Newfoundland the remaining 15 p.c.

19.—Paper Production by Province 1955 and 1956

Province	1955		1956	
	Quantity	Value	Quantity	Value
	tons	\$	tons	\$
Quebec.....	3,789,087	453,543,730	4,074,317	501,614,263
Ontario.....	2,225,109	298,099,787	2,337,501	324,446,472
British Columbia.....	725,096	86,193,930	750,445	89,281,869
Nova Scotia, New Brunswick, Manitoba and Newfoundland.....	1,260,921	143,601,800	1,304,522	155,149,751
Totals.....	8,009,213	981,439,247	8,466,785	1,070,492,355

Exports of Newsprint.—Total exports of newsprint from Canada in the years 1947-56 are given in Table 20.

20.—Exports of Newsprint to the United Kingdom, United States and All Countries 1947-56

Year	United Kingdom		United States		All Countries	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	\$	tons	\$	tons	\$
1947.....	55,520	4,623,491	3,675,349	291,892,729	4,220,779	342,293,158
1948.....	60,090	5,319,660	3,917,366	340,334,045	4,328,084	383,122,743
1949 ¹	108,213	9,930,070	4,346,414	395,259,575	4,789,296	440,054,067
1950.....	19,095	1,861,980	4,724,937	463,155,927	4,938,069	485,746,314
1951.....	72,205	7,488,187	4,774,947	496,852,197	5,112,061	536,372,498
1952.....	131,005	14,575,722	4,850,962	534,372,859	5,327,430	591,790,209
1953.....	158,108	18,237,016	4,917,216	564,404,267	5,375,251	619,033,394
1954.....	250,185	28,639,166	4,866,649	558,633,675	5,521,530	635,669,692
1955.....	286,343	33,013,480	5,027,767	578,322,418	5,763,167	665,876,987
1956.....	347,905	41,531,514	5,218,911	615,941,551	5,967,194	708,384,822

¹ Newfoundland included from 1949.

World Newsprint Statistics.—Since 1913 Canada has led the world in the export of newsprint. Figures for the leading producing countries for the two latest years available are given in Table 21; 1939 figures are included for comparative purposes. The six countries listed accounted for 76 p.c. of the estimated world production in 1956, Canada contributing about 50 p.c.

21.—Estimated World Newsprint Production and Exports by Leading Countries 1939, 1955 and 1956

(Source: Newsprint Association of Canada)

Country	Production			Exports		
	1939	1955	1956	1939	1955	1956
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Canada (including Newfoundland) ¹	3,175	6,064	6,243	2,935	5,805	5,972
United States.....	939	1,552	1,717	13	207	152
United Kingdom.....	848	694	720	42	155	152
Finland.....	550	590	657	433	526	588
Sweden.....	306	399	457	199	218	274
Norway.....	222	183	191	188	140	149

¹ Figures differ slightly from DBS figures given in Tables 18 and 20, because of different bases of calculation.

Statistics of the Combined Pulp and Paper Industries.*—The manufacture of pulp, the manufacture of paper and the manufacture of products made of paper may, under certain conditions, be treated as three industries for they are frequently carried on in separate plants by entirely independent companies. The manufacture of basic stock and the converting of this paper into stationery and other highly processed paper products are often combined in one plant. This conversion of paper within the pulp and paper industry represents only a small part of Canada's production of converted paper and boards, the bulk of which is still made in special converting mills classified in other industrial groups.

* See Chapter XV for further particulars regarding the pulp and paper and paper-converting industries.

The presence of these different combinations in one mill makes it difficult to separate many of the statistics relating to the manufacture of pulp, basic paper and converted paper products. All converting operations carried on in paper mills in this industry are attributed to the particular industrial group of converting plants to which they properly belong. Including manufacturing operations as far as the basic paper-making stage there were altogether 125 mills in operation in 1955—the same number as in 1954. The employees numbered 62,205 and their salaries and wages amounted to \$265,298,119, as against \$252,598,383 the previous year. If the pulp made for their own use in combined pulp and paper mills is disregarded the total value of materials and supplies used in the industry as a whole can be considered as amounting to \$546,079,192 in 1955, \$515,257,595 in 1954 and \$499,350,994 in 1953; the gross value of production as \$1,326,938,138 in 1955, \$1,241,558,451 in 1954 and \$1,179,665,443 in 1953 and net valuation of production \$689,818,173 in 1955, \$641,517,070 in 1954 and \$599,934,934 in 1953.

The pulp and paper industry is one of the leading single manufacturing industries in Canada. In 1955 as in 1954 it was first in net value of production, in gross value of production, in employment and in salaries and wages paid. The manufacturing stages only of the industry are considered in these comparisons, no allowance being made for capital invested, men employed, wages paid or primary products sold in connection with the woods operations. These form an important part of the industry as a whole but cannot be separated from woods operations carried on in connection with sawmills and other industries. In world trade, pulp and paper are generally Canada's main commodities—newsprint alone, over a considerable period, has brought Canada more export dollars than wheat, nickel or any other single commodity.* The United States market absorbs annually over 83 p.c. of all pulpwood exports and over 84 p.c. of the pulp and the paper shipments of Canada. About 50 p.c. of the paper consumed in the United States is either of Canadian manufacture or is made from wood or pulp imported from Canada.

THE PULP AND PAPER RESEARCH INSTITUTE OF CANADA†

The Pulp and Paper Research Institute of Canada is a centre of research and learning, concerned with virtually every aspect of the production and use of pulp and paper products and with the training of McGill postgraduate students in fundamental research fields of interest to the pulp and paper industry. The Institute staff carries out applied research in the fields of woodlands operations and pulp and paper mill operations, and fundamental research in support of these fields; the graduate students work towards master's and doctorate degrees in physical chemistry, wood chemistry, chemical and mechanical engineering.

Facilities, therefore, include laboratories for pulp and paper testing and for chemical, physical, radio-chemical, chemical engineering and mechanical engineering research including hydraulics; a pilot plant for chemical pulping, pulp and chip refining, and waste liquor pyrolysis; a library on pulp and paper and related subjects; photographic and microscopic services; and a woodlands research department. At present the Institute has a permanent staff of about 160.

Established in 1913 as a branch of the Dominion Forest Products Laboratories, the Institute was re-organized in 1927 under the joint sponsorship of the Canadian Pulp and Paper Association, the Federal Government, and McGill University. Since then the Institute has occupied a building erected by the pulp and paper industry, but an additional building of modern design is being constructed at Pointe Claire on the western outskirts of Montreal by the Government of Canada in lieu of its annual financial grants. It will cost \$2,225,000 and will house Institute staff and facilities at present scattered about the McGill campus in temporary quarters. One wing of the building will contain laboratories typical of a college chemistry building, another will provide laboratories for engineering research, and a third will provide for administrative offices.

* For reasons given in Section 1, Part II of the Foreign Trade Chapter, gold is excluded from Canadian trade statistics.

† Prepared by Mr. Rielle Thomson, Information Manager, Canadian Pulp and Paper Association, Montreal, Que.

The Institute's research activities comprise a basic program, contract research, and technical services. The basic program is supported by assessments from the Maintaining Membership (some 40 companies, representing more than 100 mills and about 90 p.c. of the total production of the Canadian industry), by a basic grant from the Canadian Pulp and Paper Association, and by appropriations from McGill University (primarily for student work). It comprises research of interest to the industry broadly, as distinct from that which is the concern only of a single company or a small segment of the industry.

The projects in the basic program range from studies of the growing seedling in the forest to the converted pulp and paper product. The emphasis is, however, primarily on fundamental and exploratory studies. The Institute is regarded as a centre for broad, long-range and uninterrupted studies of basic principles which individual pulp and paper companies would find difficult to justify in terms of immediate applied objectives. Moreover, the Institute is a centre of highly specialized equipment and manpower which individual companies would not be in a position to keep occupied on a continuous basis.

In addition to its permanent staff, the Institute, in co-operation with McGill University, has some 25 graduate students working on fundamental projects in the background of pulp and paper technology, which also serve as their thesis topics. The head of the Institute's Wood Chemistry Division, who is also E. B. Eddy Professor of Industrial and Cellulose Chemistry at McGill, directs graduate student work on such subjects as the behaviour of the materials of which wood is made—cellulose, lignin, resins, sugars, and other carbohydrates. The head of the Institute's Physical Chemistry Division, also a Research Associate in the McGill Chemistry Department, directs graduate student work in the physical chemistry of fibres, e.g., the forces which cause cellulose fibres in a water suspension to mat together to form paper. The head of the Institute's Chemical Engineering Division, also Associate Professor of Chemical Engineering at McGill, directs graduate students in such chemical and mechanical studies as the friction losses occurring when pulp flows through pipelines.

In addition to its basic program of research, the Institute undertakes contract research projects for individual companies or groups of companies in the pulp and paper or allied fields. The larger of these co-operative contracts have been concerned with problems of particular segments of the Canadian pulp and paper industry, such as the investigation into the causes of corrosion in alkaline pulping equipment, and the current project investigating the rapid deterioration of paper machine wires.

A further function of the Institute is to provide a broad range of technical information services to the industry and, to some extent, to other industries and the public. It maintains a specialized library for this purpose which supplies bibliographies, abstracts, translations, and critical reviews to the scientific staff and the industry.

In addition to its own program, the Institute co-operates with outside agencies in special projects. It maintains close liaison with the National Research Council and, in the past, has carried out joint projects with the Applied Chemistry Division and other Divisions of that organization. At present the Institute is engaged in a practical study of spruce regeneration in mixed wood stands, co-operating with two pulp and paper companies, a research foundation, and federal and provincial government departments.

Some of the major projects in the Institute's basic program are briefly outlined in the following paragraphs.

Woodlands Research.—Institute research in this field includes silvicultural studies of forest regeneration, such as forest seeding and planting techniques and the use of growth stimulants, biological studies of insect control, and engineering studies of wood harvesting methods. A major part of woodlands research is in this latter field such as the project on full-tree logging, a method which involves felling and transporting the whole tree from the stump to a central point where it is processed to pulpwood, and where by-products from bark and slash may be made. The basic study of the forces involved in pulpwood

holding grounds will make possible accurate engineering design of the component structures. This project has already developed much of the information required for transverse holding grounds, and is proceeding to the study of parallel holding grounds.

Mechanical Pulping.—A process consisting of grinding wood at low energy and subsequently refining the rejects is being studied as a possible way of reducing energy consumption and improving the products. A basic study of grinding is under way to determine the fundamentals governing the mechanical separation of paper-making fibres from the parent wood. This may lead to a new or improved process for producing mechanical pulp.

Chemical Pulping.—Of particular importance to the field of resources conservation is the Institute's development work in high-yield pulping processes aimed at recovering the greatest possible weight of usable wood fibres from each unit of wood. Experiments on the use of hardwoods in paper-making, to supplement or to supplant the traditional softwoods, are being made. A major change in pulp and paper technology, in which the Institute is providing basic data, concerns new methods of chemical pulping that will permit continuous rather than batch processing.

Paper-Making Studies.—Studies of paper formation, and investigations on the influence of fibre properties on the initial strength development of paper webs, are being carried out. The effect of fibre flocculation on the behaviour of fibre suspensions and the uniformity of paper is being studied to elucidate the mechanism involved in the aggregation of fibres under paper-making conditions.

Process Control.—The Institute carries out research on improving production control and product quality which involves modifying existing control methods and developing new ones. Related to this has been the development of new instruments, among which have been the *Canadian Standard Freeness Tester*, the *PAPRIC Electronic Dirt Counter*, the *Johnson Fibre Classifier*, the *Chapman Smoothness Tester* and the *Reference Electrode* for the continuous measurement of the actual pH at the high temperatures and pressures existing inside the pulping digester. At present, a recording flow instrument is being developed for rapid and continuous measurement of lignin concentration in cooking liquors by ultra violet absorption.

Waste Utilization.—The disposal, and if possible the utilization, of all types of waste from the industry—bark, liquor, slash, etc.—has been a major concern of this Institute since its inception. One of the most promising new developments in this line is the *Atomized Suspension Technique*. Solutions or slurries to be treated are atomized into the top of a tower with heated walls, thus creating a finely divided suspension of droplets in their own vapour, which evaporates to dryness and can then be subjected to pyrolysis or other chemical reactions within the same tower. The application of this technique has already been successfully tested on the small pilot-plant scale in the recovery of chemicals and heat from kraft, soda, neutral sodium semi-chemical and acid sodium sulphite spent liquors, and it has also been tested on other mill wastes, ore slurries, fine chemicals, and mineral solutions. It is expected that ultimately the Institute-developed equipment will be widely used in processing not only industrial but also sanitary wastes, which will assist in reducing the contamination and pollution of the nation's waterways. Plans are already being carried forward to test this last application on the pilot-plant scale.

Subsection 4.—The Veneer and Plywood Industries*

The production of hardwood plywood in Canada is confined largely to the eastern provinces. Changes in manufacturing methods applied to hardwood plywood resulted in its adaptation to many uses, particularly to attractive wall finishes for homes and other buildings, flush doors, radio and television cabinets and other home and office furniture.

* Prepared by the Forest Products Laboratories, Forestry Branch, Department of Northern Affairs and National Resources, Ottawa.

Softwood plywood is produced almost entirely in British Columbia. Douglas fir is most commonly manufactured because of the availability of large diameter logs of this species from which large sheets of clear veneer can be obtained. The use of synthetic resin adhesives is responsible for this product that has become almost indispensable to the construction industry—for wall panels, concrete forms, roofing, sheeting, house sub-floors; for construction of silos, cribs and caissons; for box-car linings, bus bodies, trailers, power driven and other types of watercraft; for box panels and crate linings, case goods and core-stock for furniture; for plywood-faced doors and for many other uses.

The heating of glued veneers in moulds by high-frequency electric fields (dielectric heating) permits the manufacture of shaped plywood which is now being used for furniture, radio cabinets and similar products. The possibilities of this development are becoming more widely appreciated.

Veneers of Canadian manufacture are not confined to species native to Canada. A number of imported woods of special decorative value are veneered successfully and provide the furniture industry with a wide choice of finishes. Exports of veneer and plywood produced in Canada increased in value from \$969,256 in 1938 to a high of \$30,103,676 in 1955, but declined to \$29,020,281 in 1956.

22.—Veneer and Plywood Produced for Sale by Type 1952-55

Type	1952	1953	1954	1955
Veneer (1/10 inch Basis).....M sq. ft.	412,751	577,504	495,222	643,213
\$	11,999,203	17,639,735	14,464,264	18,437,625
Domestic softwood.....M sq. ft.	185,654	265,222	214,005	318,572
\$	2,343,415	3,194,222	2,491,706	3,817,678
Domestic hardwood.....M sq. ft.	217,550	296,986	276,096	315,564
\$	8,863,025	13,039,291	11,560,934	13,881,934
Imported wood.....M sq. ft.	9,547	15,296	5,121	9,077
\$	792,763	1,406,222	411,624	738,013
Plywood (1/4 inch Basis).....M sq. ft.	595,038	779,051	888,499	1,159,760
\$	49,909,515	66,256,470	66,971,822	82,593,534
Domestic softwood.....M sq. ft.	464,417	628,621	724,799	956,235
\$	32,418,606	44,718,998	45,985,321	57,188,234
Domestic hardwood.....M sq. ft.	126,007	142,926	151,003	189,540
\$	16,131,288	19,053,363	18,303,554	22,163,977
Imported wood.....M sq. ft.	4,614	7,504	12,697	13,985
\$	1,359,621	2,484,109	2,682,947	3,241,323

Subsection 5.—The Wood-Using Industries

The wood-using group comprises thirteen industries,* other than sawmills and pulp mills, using wood as their principal raw material. Most of these industries obtain from the sawmills the wood they transform into planed and matched lumber, boxes, barrels, furniture, caskets and other manufactured or semi-manufactured products but the veneer and plywood and excelsior industries usually manufacture their products direct from logs and bolts.

This wood-using group does not include every industry into which wood enters as a raw material but only those producing commodities where the chief component is wood. There are a number of industrial groups in which wood is an important raw material as in the manufacture of agricultural implements, musical instruments, etc., and others such as the manufacture of machinery in which wood is necessary but only in comparatively small proportions.

* Furniture; sash, door and planing mills; veneer and plywood; hardwood flooring; boxes, baskets and crates; wood-turning; coffins and caskets; cooperage; woodenware; lasts, trees and wooden shoe findings; beekeepers' and poultrymen's supplies; excelsior; and other wood-using industries.

Wood is used indirectly in the manufacture of all-metal products such as wooden patterns and wooden foundry boxes in making metal castings. Wood in the form of barrels, boxes and other containers also enters into the distribution of commodities of all kinds.

In 1955 the wood-using group, comprising 4,471 establishments, gave employment to 75,087 persons and paid out \$201,883,078 in salaries and wages. The gross value of its products was \$730,860,564 and the net value \$334,917,793.

The importance of secondary industry in providing employment will be appreciated when it is noted that the number of employees in the wood-using group was more than 75,000, as compared with sawmills with approximately 58,000 employees and pulp and paper with about 62,000 in 1955.

23.—Wood Used by Wood-Using Industries 1952-55

Item	1952	1953	1954	1955
Sawn lumber..... M ft. b.m. \$	2,049,314 145,056,681	2,073,065 147,031,589	2,054,525 143,723,883	2,400,525 171,369,570
Sawlogs, veneer logs, flitches, butts and crotches. M ft. b.m. \$	312,421 26,100,966	377,420 31,920,920	378,572 30,493,926	480,705 39,979,594
Veneers and plywoods..... M sq. ft. \$	302,971 20,537,175	378,815 26,738,490	337,754 25,320,813	393,762 30,074,481
Other wood used..... \$	7,040,180	5,959,593*	4,856,318	5,155,601
Totals..... \$	198,735,002	211,650,592*	201,394,940	246,579,246

Subsection 6.—The Paper-Using Industries

The paper-using group comprises three industries* engaged primarily in manufacturing commodities of paper and paperboard. Establishments engaged in printing, publishing, bookbinding and the allied graphic arts also consume large quantities of these materials but under the standard industrial classification adopted by the Dominion Bureau of Statistics in 1948 they are grouped separately.

Some paper-using establishments purchase paper as a raw material from the pulp and paper industry and merely subject it to some form of treatment to fit it for further manufacture in some other industry. This occurs in the manufacture of coated, sensitized or corrugated paper. Other firms purchase paper and subject it to some treatment to fit it for a definite final use such as in the manufacture of asphalt roofing or waxed wrapping paper. Another large group uses paper and paperboard as a raw material for conversion into paper bags, boxes, envelopes, laminated wallboard and other commodities.

The manufacture of containers and packages of various kinds has grown very rapidly since ways have been found of converting tough and cheap paper stocks into strongly made boxes which compete very favourably with the wooden crates and packing cases used formerly. Small attractive paper containers for use in the retail trade are growing in favour and constitute an important branch of the paper-using industries.

Composition roofing and sheathing, consisting of paper felt saturated with asphalt or tar and in some cases coated with a mineral surfacing, is being increasingly used as a substitute for metal roofing, wooden shingles and siding materials. Wood-fibre building boards, some of which are produced by lamination in the paper-using industries, are now used extensively in construction, especially for insulating purposes, replacing lumber and wood lath.

* Paper boxes and paper bags; roofing paper; miscellaneous paper goods.

The growth of the paper-using industries in Canada since 1923 reflects these developments. In 1923 the 152 establishments in this group employed 6,870 persons, distributed \$7,442,102 in salaries and wages and produced goods valued at \$31,760,948. In 1955 these industries comprised 455 plants, provided employment for 27,545 persons whose earnings totalled \$84,478,930 and produced products worth \$427,160,367.

Subsection 7.—Printing, Publishing and Allied Industries

The printing trades group is made up of five closely related industries: printing and publishing, comprised of publishers who operate printing plants; printing and bookbinding, including general or commercial printers and bookbinders; lithographing, comprised of plants specializing in that process; engraving, stereotyping and electrotyping, including photo-engraving; and trade composition or typesetting for printers. A sixth industry covering publishers of periodicals who do not print their own publications has been included since 1949. Although strictly speaking these publishers are not manufacturers, they are closely related to the printing trades which produce the plates, cuts, etc., and print newspapers, magazines, directories, yearbooks, almanacs, house organs and other periodicals for them.

In 1955 the manufacturing printing trades employed 64,025 persons whose earnings totalled \$222,206,780. Their output was valued at \$562,538,358 and the raw materials used and services received cost \$172,832,967.

Periodicals valued at \$236,928,550 accounted for about 42 p.c. of the value of printed matter and other products, daily newspapers alone contributing \$170,656,504. The value of periodicals is made up of \$174,704,296 received from advertising and \$62,224,254 received from subscriptions and sales of publications. In addition, the 1,617 publishers in the sixth industry reported revenues of \$34,072,222 from advertising and \$11,173,763 from sales of publications.

CHAPTER XI.—MINES AND MINERALS

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Section 1.—Canada's Mineral Industry 1956-57*

Canada's thriving mineral industry reached its greatest rate of expansion in 1956, the most prosperous year in the industry's history. During the period under review, January 1956 to the end of June 1957, mineral development activity was centred mainly on a tremendous program of mine development and of plant construction. While the full impact of the resulting expansion in productive capacity remained to be felt, the program added greatly to the industry's economic status in 1956. The value of mineral output rose 15 p.c. over 1955 to a new high of \$2,068,000,000 or 7 p.c. of the value of Canada's gross national product for that year. A major contributor to Canada's export trade, the industry vied with forestry for top place in value of production exported. Foreign sales of primary ores, metals and minerals reached a value of \$1,300,000,000 and made up nearly 30 p.c. of the country's exports of all commodities. Crude petroleum exports exceeded \$100,000,000, three times that of 1955 while exports of iron ore rose 45 p.c. to \$144,443,000; developments under way in the non-ferrous base-metal field will make large new supplies of these metals available for export.

Of much significance to Canada's economic growth have been the rapid proving-up and development of its great wealth of iron ore and of its energy resources of crude petroleum, natural gas, and uranium. Crude petroleum production rose to a record 170,570,000 bbl. in 1956 and the first western Canadian oil reached Toronto markets with the extension of the Interprovincial pipeline from Sarnia to that area. Natural gas from the rich Fort St. John area of northeastern British Columbia will flow into southern British Columbia markets and into the United States to add millions to the value of Canada's export trade with the completion in 1957 of the \$152,000,000, 650-mile Westcoast Transmission natural gas pipeline. Eastern Canada is scheduled to be served with western Canadian gas for

* Except where otherwise indicated, this review was prepared under the direction of Dr. Marc Boyer, Deputy Minister of the Department of Mines and Technical Surveys, by Mary J. Giroux of the Department's Editorial and Information Staff.

industrial and domestic use late in 1958 by the Trans-Canada pipeline now under construction. Canada has a new major source of export revenue in its uranium industry, headed as it is toward an output value rate of well over \$300,000,000 annually by 1958. It has another major source of export dollars in its huge tonnages of low-grade iron ores which are attracting the attention of United States and European steel interests.

The high rate of mineral development activity continued throughout 1956. Early in 1957, however, a slackening in demand for metals and minerals resulted in a weakening in price structures particularly of copper, lead and zinc. This became more evident as the year progressed and production of these metals in 1957 was expected to be at lower levels than in 1956. Nickel markets remained firm, however, despite the action of the United States in releasing stockpile quotas for civilian use. Premium price markets disappeared and nickel sold at the standard price set by The International Nickel Company of Canada Limited—70 cents (Canadian) a pound.

While immediate prospects for copper, lead and zinc and some of the other metals and minerals were rather uncertain at the end of the review period, the long-term outlook for the industry as a whole appeared favourable. There was little doubt that the momentum of growth that had been set up within the industry by the expenditure of huge capital sums on the large-scale development of mineral resources would support continued prosperity in the immediate future, and that, in the long-term view, the increasing demand for metals and minerals, generated both at home and abroad by increases in population and steadily rising living standards, would ensure the industry's prosperity in years to come.

Subsection 1.—The Metals

The tremendous growth of the mineral industry was evident in every phase of endeavour but was greatest in metal mining where capital outlays amounting to hundreds of millions of dollars were made to increase productive capacity, particularly of copper, nickel, uranium and iron ore. In the Blind River uranium area, some \$300,000,000 to \$350,000,000 was spent from 1953 to mid-1957 on preproduction development alone. During the review period, the most significant event was the announcement by International Nickel to proceed with the development of its huge nickel deposits in the Mystery Lake-Moak Lake area of northern Manitoba. Meanwhile, widespread exploratory activity resulted in new claim-staking records in British Columbia, Manitoba and Quebec and a number of important finds were made ranging from lead and zinc in Yukon to nickel in Ungava.

The value of metal production in 1956 rose to a record \$1,134,354,000, a 13-p.c. increase over 1955 and 9 p.c. greater than the total value of Canada's mineral output in 1950. Under the stimulus of high prices, copper production increased to 706,586,000 lb., 8 p.c. higher than in 1955 and than the previous record established in 1940. Iron ore jumped 38 p.c. to 20,113,000 long tons and nickel 2 p.c. to 355,986,000 lb. Gold, lead and zinc showed declines in output, gold decreasing 4 p.c. below 1955 to 4,379,000 oz. t., lead 8 p.c. to 373,350,000 lb., and zinc 2 p.c. to 847,240,000 lb. In value, copper was up \$52,000,000, iron ore \$46,000,000, uranium \$14,000,000, and nickel and zinc, each \$7,000,000.

Several important developments during the review period served to underline the great growth potential of the industry. The signing of contracts by Eldorado Mining and Refining Limited, the Crown purchasing agent, with 18 uranium companies covering the sale of over \$1,500,000,000 worth of uranium precipitates by Mar. 31, 1963, is expected to give Canada 24 operating uranium concentration plants, handling about 45,000 tons of ore daily by 1958. The continued expansion of the country's nickel-producing capacity and International Nickel's development of its Mystery Lake-Moak Lake nickel project indicate a nickel production for Canada of some 470,000,000 lb. by 1961, 20,000,000 lb. greater than the 1956 world production (exclusive of Soviet countries). The great growth in iron ore production from high-grade properties coupled with Canada's possession of huge tonnages of ores amenable to beneficiation have already raised Canada to sixth place in world production and point to an output of between 45,000,000 tons and 60,000,000 tons by 1965.

Exports of the four principal non-ferrous base metals in all forms continued to go mainly to United States and were valued at \$537,686,829 in 1956, a \$39,560,000 increase over the previous year. Exports, in primary forms, of copper increased from 194,764 tons in 1955 to 215,837 tons in 1956 and of nickel from 173,880 tons to 176,838 tons, but exports of lead decreased from 150,867 tons in 1955 to 129,607 tons in 1956, and of zinc from 404,422 tons to 383,041 tons. The United States bought, in primary forms, 30 p.c. more copper in 1956 than in the previous year, 3 p.c. more zinc, 3 p.c. less nickel and 30 p.c. less lead. The United Kingdom bought, in primary forms, 7 p.c. less copper, 12 p.c. less lead, 32 p.c. less zinc and about the same amount of nickel.

Base metal prices were generally high in January 1956 and, with the exception of copper, remained fairly steady throughout the year. During the first half of 1957, however, a slackening in demand led to a decline in prices and in June 1957, at the end of the period under review, the prices of copper, lead and zinc in particular had fallen off considerably. Copper showed the greatest fluctuation, rising from 43 cents a pound in January 1956 to 46 cents a pound in February 1956 then declining to 45.375 cents in June and to 35 cents in October 1956, closing the year at 34.750 cents a pound. In 1957 it dropped steadily to 27.88 cents by the end of June that year. Zinc remained at 13.50 cents a pound throughout 1956 and until May 1957 when it dropped to 11.50 cents a pound and then to 10.50 cents a pound at the end of June 1957. Lead was 15.62 cents a pound in January 1956 and 15.50 cents a pound during the remainder of 1956. In January 1957 it dropped to 15.25 cents a pound, remaining there until May when it dropped again to 14.75 cents a pound and to 13.25 cents a pound at the end of June 1957. Nickel was 63 cents (Canadian) a pound in 1956 until December when it was raised to 70 cents a pound.

The decline in prices was followed by a drop in the production of several of the metals. During the first six months of 1957, copper decreased 4 p.c. in volume of output below that of the same period in 1956 to 335,688,000 lb.; lead, 2 p.c. to 182,878,000 lb.; and zinc, 9 p.c. to 391,618,000 lb. Nickel, however, rose 6 p.c. to 190,732,000 lb. and iron ore 3 p.c. to 5,837,000 long tons.

Accounts of developments in metal mining on a regional basis follow.

British Columbia.—Canada's major source of lead and zinc, British Columbia draws around 56 p.c. of the total value of its mineral production from these two metals. Output comes mainly from the famous Sullivan mine of The Consolidated Mining and Smelting Company of Canada Limited at Kimberley, the largest lead-zinc-silver mine in the world. The Province's metal production also comprises copper, silver, gold, tungsten concentrates, and iron ore, in order of value, and minor amounts of antimony, bismuth, cadmium, indium and tin. British Columbia ranks fourth among the provinces and territories in value of mineral production and is the only Canadian source of antimony, indium and tin.

Highlights of the period under review were: the expenditure of large capital sums on the development of the natural gas and crude petroleum industries in the northeastern part of the Province; the exploration for and development of copper properties in various areas, and an unequalled amount of exploratory activity for new sources of mineral wealth.

Of much significance to the future development of British Columbia's metal-mining industry and to the Province's whole industrial potential were the continued disclosure of great quantities of natural gas, the discovery in commercial quantities of crude petroleum in the Peace River area, and the outstanding progress made toward marketing this gas in southern British Columbia and in the United States. (Developments in natural gas and crude petroleum in the Province are described in a separate article on p. 510.)

Higher average prices for lead and zinc contributed greatly to the record value of \$199,318,000 of the Province's mineral output in 1956, a 5-p.c. increase over the record set in the previous year. Zinc output increased from 431,772,000 lb. valued at \$58,937,000 in 1955 to 443,711,000 lb. valued at \$65,714,000 in 1956 while lead declined from 322,985,000 lb. valued at \$46,445,000 to 290,277,000 lb. worth \$45,022,000. Consolidated Mining and Smelting produced 386,082,000 lb. of zinc, a record for the second successive year, and 298,524,000 lb. of lead. Concentrates came from the Company's four mines—the Sullivan, the H.B. near Salmo, the Bluebell at Riondel and the Tulsequah Chief in northern British

Columbia—and were treated in Company plants at Trail with custom ores and concentrates from other properties in the Province, from Yukon and from foreign shippers. Consolidated Mining and Smelting operates Canada's only lead smelter and one of its two zinc plants, the other being that of Hudson Bay Mining and Smelting Company Limited near Flin Flon in Manitoba. Other lead and zinc producers in British Columbia in 1956 included Giant Mascot Mines Limited, Canadian Exploration Limited, a subsidiary of Placer Development Limited, Reeves Macdonald Mines Limited, Sheep Creek Mines Limited, and Silbak Premier Mines Limited.

During the first six months of 1957, the Province's output of lead showed a slight increase over that of the same period in 1956 while its zinc production decreased 4 p.c. Consolidated Mining and Smelting closed its Sullivan open-pit mine in June 1957 and announced intentions of ceasing operations at Tulsequah Chief mine. Giant Mascot Mines stopped production in June because of the exhaustion of ore reserves.

The rise in the price of copper during 1955 and early 1956 resulted in a widespread search for new deposits and the development of several properties, ranging from potentially small to large-scale producers. British Columbia's copper output declined 4 p.c. in volume below 1955 but increased 8 p.c. in value. Production came from the Copper Mountain mine of The Granby Consolidated Mining, Smelting and Power Company Limited, the Britannia Beach operations of Britannia Mining and Smelting Company Limited and from the Tulsequah Chief copper-zinc-lead property. New copper production came early in 1957 from the Motherlode mine, a former copper producer near Greenwood, of Woodgreen Copper Mines Limited, and from the Velvet mine at Rossland of Mid-West Copper and Uranium Mines Limited. Companies preparing for production include Phoenix Copper Company Limited, a subsidiary of Granby, at Granby's former producing mine near Phoenix, and Granduc Mines Limited 25 miles northwest of Stewart. Several other companies had properties under active exploration, including American Smelting and Refining Company in Highland Valley, Cowichan Copper Company Limited on Vancouver Island, and Granisle Copper Limited, a Granby subsidiary, on an island in Babine Lake. Following the sharp drop in the price of copper during the first half of 1957, several companies which had been contemplating production decided to await more favourable market conditions.

With the exception of some 6,600 lb., British Columbia accounted for all the Canadian output of tungsten concentrates in 1956. Output comes from the Salmo operations of Canadian Exploration Company Limited, and in 1956 amounted to 2,200,000 lb. valued at \$6,050,000. The Company has a contract with the General Services Administration of the United States for a maximum of 570,000 short ton-units of tungsten trioxide from 1952 to June 30, 1958, at a price ranging from \$55 to \$60 a unit.

The Province's production of iron concentrates, which in 1956 totalled 331,000 long tons, is shipped to Japan. Output came from two properties: the Iron Hill mine of Utah Company of America on Vancouver Island, which was considered worked out and closed in December 1956, and the Texada Island property of Texada Mines Limited. A third company, Empire Development Company Limited, formed in mid-1956, plans to bring the Elk River magnetite deposit on northern Vancouver Island into production in the latter part of 1957. The Company has contracts with iron and steel interests in Japan for the shipment of 1,380,000 long tons of concentrate over a three-year period. The concentrates will be shipped from Port McNeil, 22 miles from the deposits. In July 1957, British Columbia was shipping iron concentrates to Japan at a rate of 2,000 tons monthly.

The Province in 1956 accounted for 32 p.c. of Canada's output of silver, amounting to 9,331,000 oz. t. valued at \$8,371,000. Most of the silver comes from base-metal operations, the chief source being the Sullivan mine.

Gold production in British Columbia in 1956 totalled 211,000 oz. t. valued at \$7,265,000. The three lode gold producers, Bralorne Mines Limited, The Cariboo Gold Quartz Mining Company Limited and Pioneer Gold Mines of B.C. Limited, accounted for 82 p.c. of the output. By-product gold from base-metal mining operations declined sharply, mainly because of the sizable drop in gold production at the Tulsequah mine.

The Prairie Provinces.—The marked expansion of uranium mining in the Beaverlodge area of northern Saskatchewan and the rapid growth in Manitoba's base-metal potential highlighted the outstanding progress made in metal mining in these two provinces during the review period. With the exception of a minor amount of placer gold, Alberta, which lies almost entirely in the Interior Plains region, has no metal production.

The value of Saskatchewan's metal production increased from \$54,709,000 in 1955 to \$70,671,000 in 1956, mainly because of the increase in the value of uranium output, while that of Manitoba showed a slight decline to \$39,209,000 as a result of reduced sales of nickel concentrate. The operations of Hudson Bay Mining and Smelting Company Limited remain the major source of the base-metal wealth of the two provinces. The Company operates the Flin Flon copper-zinc mine which lies astride the Manitoba-Saskatchewan boundary, a concentrator, a copper smelter and a zinc plant at Flin Flon in Manitoba and three small mines near Flin Flon. The larger part of the Flin Flon orebody lies in Saskatchewan. Base-metal production also comes from the nickel-copper property of Sherritt Gordon Mines Limited at Lynn Lake in northern Manitoba.

Uranium moved into second place, next to copper, in value of output in Saskatchewan in 1956. Production was valued at \$24,292,000, just double that of 1955 and only \$3,300,000 less than the total value of copper produced. Output comes from the Beaverlodge area in the northern part of the Province from the operations of the area's first producer, Eldorado Mining and Refining Limited which started production in April 1953; from Gunnar Mines Limited in St. Mary's Channel section; and from several smaller operations, including those of Lorado Uranium Mines Limited which operates a custom mill in the area. Eldorado carried out extensive underground development and expanded its mill capacity from 750 tons to 2,000 tons daily, of which 150 tons has been allocated to the treatment of custom ores. Gunnar, which entered production in 1955, increased its mill capacity from 1,250 tons to 1,650 tons. Mining is by open-pit methods but the Company is preparing for eventual underground operations and it is hoped that before the open pit is finished all mill feed during the severest winter months will come from underground. Lorado commenced treatment of its own and custom ores in its new 500-ton mill in April 1957. The Company plans to proceed almost immediately with the expansion of the plant to 750 tons. Lorado has contracts with Cayzor Athabasca Mines Limited, St. Michael Uranium Mines Limited, Lake Cinch Mines Limited, National Explorations Limited and Black Bay Uranium Limited. Rix-Athabasca Mines Limited continued to ship its ore to Eldorado for treatment.

Nickel production in Manitoba continued to come from the Sherritt Gordon nickel-copper mine at Lynn Lake. Despite the fact that sales of nickel concentrate in 1956 were lower than in 1955, the Company experienced its best production year in 1956 (1955 figures in brackets) with an output of 19,240,000 (16,667,000) lb. of nickel, 9,000,000 (10,156,000) lb. of returnable copper in concentrate, 107,000 (16,000) lb. of cobalt and 71,000 (55,000) tons of ammonium sulphate. Nickel concentrates from the Lynn Lake mine are treated in the Company's chemical metallurgical plant at Fort Saskatchewan, 15 miles northeast of Edmonton in Alberta. Copper concentrates are shipped to Noranda Mines Limited in Quebec for treatment.

Manitoba's nickel-producing potential was greatly increased with the announcement by International Nickel to proceed with the development of its Mystery Lake-Moak Lake property in the northern part of the Province. The project involves the expenditure of \$175,000,000 to develop two new nickel mines, Thompson and Moak Lake, and related surface plants, the construction of a 30-mile branch rail line from Sipiwesk on the CNR near Thicket Portage and a 22-mile Company-owned rail line between Thompson and Moak Lake, and certain installations in the new town of Thompson which is expected to have an initial population of 8,000. This project and the continued expansion in the Company's Sudbury area facilities are expected to raise Company production to 385,000,000 lb. of nickel a year, an increase of 100,000,000 lb. over output in 1956. Production at the Thompson and Moak Lake mines is expected to start in 1960 and to reach capacity in 1961.

Hudson Bay Mining and Smelting in 1956 produced 92,680,000 lb. of copper, 126,568,000 lb. of zinc, 105,000 oz. t. of gold, 1,587,000 oz. t. of silver, 157,000 lb. of cadmium and 108,000 lb. of selenium. The Company carried out active exploration in the two provinces and discovered three new orebodies near the town of Snow Lake in Manitoba about 74 miles east of Flin Flon. It is proceeding with the development of one of these, the Chisel Lake deposit, and is actively exploring the other two, one of which is at Ghost Lake and the second at Stall Lake.

Saskatchewan and Manitoba together produced 202,150 oz. t. of gold in 1956. Output from base-metal operations totalled 105,600 oz. t. in 1956. The remainder came from three lode gold mines in Manitoba—the San Antonio mine of San Antonio Gold Mines Limited in the Rice Lake area, which also controls the adjoining property of Forty-Four Mines Limited, and the Nor-Acme mine in the Snow Lake area, which is under lease to Britannia Mining and Smelting Company Limited.

Silver is produced as a by-product mainly of base-metal operations, Flin Flon being the chief source. The remainder comes from the Sherritt Gordon Lynn Lake nickel-copper mine, from Nor-Acme mine and San Antonio mines, all in Manitoba. Production from Saskatchewan and Manitoba in 1956 amounted to 1,602,000 oz. t.

Ontario.—The widespread development of new mines, the construction of new milling plants and an intensive exploration of new and old properties combined to make the period under review one of much solid achievement for Ontario's metal-mining industry. The value of metal production rose 9 p.c. over 1955 to a record \$512,356,000 but the full effect of new production stemming from the marked increase in pre-production development activity will not be felt for a year or two. Great strides were made in the development of a major uranium-mining industry in the Blind River area where almost the spectacular has been achieved within a very few years.

As Canada's leading metal producer, Ontario in 1956 accounted for all of the Canadian output of the platinum metals, 94 p.c. of the nickel, 57 p.c. of the gold, 44 p.c. of the copper and 25 p.c. of the iron ore. Significant gains were recorded in the volume and value of the Province's output of copper, nickel, iron ore and uranium. Gold and the platinum metals, however, showed slight declines below 1955.

The Province's nickel output which came from the operations of International Nickel Company, the world's greatest nickel producer, and from Falconbridge Nickel Mines Limited and two small producers, all in the Sudbury area, increased to 334,096,000 lb. valued at \$209,663,000 compared with the 1955 output of 322,322,000 lb. valued at \$198,489,000. International Nickel mined 15,511,000 tons of ore, the highest tonnage in the Company's history. Ninety-two per cent of the ore came from underground operations at the Froid-Stobie, Creighton, Murray, Garson and Levack mines and the remainder from the Froid open pit. The Company also operates two concentrators, two smelters and a copper refinery near Sudbury, and a nickel and cobalt refinery at Port Colborne in southern Ontario. In 1956 it produced 286,000,000 lb. of nickel. Expansion and modernization of production facilities continued in line with the plans to raise the Company's nickel-producing capacity to 385,000,000 lb. by 1961 through the development of its Mystery Lake-Moak Lake properties in northern Manitoba, with a scheduled production of 75,000,000 lb. annually, the remainder to come from expansion in the Sudbury area.

Falconbridge Nickel has an expansion program under way to raise its nickel-producing capacity to 55,000,000 lb. by 1960. Production in 1956 amounted to 43,384,000 lb. compared with 41,137,000 lb. in 1955. Output came from the Company's Falconbridge, Falconbridge East, McKim, Mount Nickel, Hardy and Longvack mines near Sudbury. The Longvack mine started operations in May 1956. The Company also operates three concentrators and a smelter in the Sudbury area and a refinery at Kristiansand in Norway.

A minor output of nickel came from the operations of Nickel Rim Mines Limited and of Nickel Offsets Limited, also in the Sudbury area. The latter property was closed in January 1957 because of the exhaustion of ore reserves. Meanwhile, a number of new

properties were under exploration and development, mainly in the Kenora area in the northwestern part of the Province. However, underground exploration at one of these, Kenbridge Nickel Mines Limited, a Falconbridge subsidiary, was stopped in May 1957.

Copper production rose 6 p.c. in volume and 18 p.c. in value over the 1955 output to 309,199,000 lb. valued at \$126,951,000 and intensive pre-production development at a number of properties, particularly in the Manitouwadge area in northwestern Ontario, indicated a further marked increase in Ontario's copper output starting in 1957. International Nickel accounted for 88 p.c. of the output, and Falconbridge Nickel for 8 p.c. The remainder came from Nickel Rim and Nickel Offsets, Temagami Mining Company Limited in the Temagami area, and Min-Ore Mines Limited near Matachewan.

In the Manitouwadge area, Willroy Mines Limited brought its copper-zinc property into production in July 1957 and Geco Mines Limited expected to start operations in September 1957 at its copper-zinc-silver property. The new Willroy mill has a rated capacity of 1,000 tons and Geco's of 3,300 tons. Since the discovery of copper-zinc deposits in the area in 1953, two rail lines and a highway have been built into it and a modern mining community designed to accommodate 6,000 people is growing up at the Manitouwadge townsite.

Ontario is one of Canada's richest sources of iron ore. Production in 1956 increased 29 p.c. in volume and 17 p.c. in value over 1955 to 5,008,000 long tons valued at \$40,021,000. Production comprised direct shipping ore from Steep Rock Iron Mines Limited, iron sinter from Algoma Ore Properties Limited in northwestern and northern Ontario respectively, and pellets from Marmoraton Mining Company Limited in southeastern Ontario and from International Nickel's new plant at Copper Cliff in the Sudbury area. Shipments from Steep Rock increased from 2,266,000 long tons in 1955 to a new high of 3,317,000 long tons and came mainly from the Company's Hogarth open-pit mine. Steep Rock continued to carry out extensive development work on its orebodies as part of its development program to raise production to 5,500,000 long tons annually commencing in 1959 from both open-pit and underground operations. In the same area, Caland Ore Company Limited is preparing "C" orebody which it has leased from Steep Rock for production by 1960. Caland is looking to an ultimate annual output of 3,000,000 long tons which will bring shipments from the area to a minimum of 8,500,000 long tons by the mid-1960's and to 10,000,000 long tons a few years later.

Algoma Ore Properties Limited in the Michipicoten area produced 1,411,000 long tons of sinter in 1956, slightly less than in 1955, from its Helen and Victoria underground mines. About two-thirds of the siderite ore from the mines is direct sintering and one-third requires beneficiation in the sink-float plant at Jamestown before sintering. The Company is expanding its facilities at Jamestown and carrying out underground development to raise output capacity to 2,000,000 long tons annually by 1958. Marmoraton Mining Company Limited, a subsidiary of Bethlehem Steel Company of Bethlehem, Pennsylvania, shipped 283,000 tons of high-grade iron ore pellets in 1956 from its operations near Marmora by rail to Picton and by boat to the parent company's steel plant at Lackawanna, New York. Early in 1956, International Nickel began the shipment of high-grade iron oxide pellets from its new \$19,000,000 iron-ore recovery plant near Copper Cliff, producing 71,000 long tons that year. At capacity operation, the plant will treat 1,000 tons of nickeliferous pyrrhotite a day for a production of 1,000,000 tons of pellets a year. Noranda Mines Limited operated its sulphur-iron plant at Port Robinson near Welland at about half capacity and produced 48,000 long tons of iron sinter. Exploratory activity during the period was carried out in various areas containing iron-bearing occurrences of possible commercial importance.

Uranium proved to be the real headline winner in Ontario's metal-mining industry during the review period. Two areas were under development, the Blind River area of northern Ontario and the Bancroft area in the southeastern part of the Province. Output rose from a value of less than \$500,000 in 1955 to almost \$6,000,000 in 1956 and was expected to exceed \$100,000,000 in 1957.

Developments in the Blind River area, where companies already in production or preparing for production have officially published reserves of 250,000,000 tons with average grade of 2.0 lb. of uranium or better, have almost overnight made Ontario a major world source of this metal. By September 1956, Eldorado Mining and Refining Limited, the Crown purchasing agent, had signed contracts or given letters of intent to eight companies in the area covering the sale of over \$1,100,000,000 worth of uranium precipitates by Mar. 31, 1963. By 1958, eleven concentration plants are expected to be in operation handling an estimated daily throughput of 34,300 tons. At the beginning of the review period the area had one producer, Pronto Uranium Mines Limited, with a milling capacity of 1,500 tons daily. By July 1957, it had three additional properties in production, the Quirke Lake and Nordic Lake mines of Algom Uranium Mines Limited each at 3,000 tons daily and the property of Consolidated Denison Mines Limited. Four others were scheduled to start operations before the end of 1957. These comprised two (the Lake Nordic at 4,000 tons daily and the Panel at 3,000 tons daily) of the three properties of Northspan Uranium Mines Limited; Can-Met Explorations Limited at 2,500 tons daily, and Stanleigh Uranium Mining Corporation Limited at 3,000 tons daily. Stanrock Uranium Mines Limited and Milliken Lake Uranium Mines Limited, each at 3,000 tons daily, and Northspan at its Spanish American property at 2,000 tons daily are preparing for production during the first half of 1958. The largest operation is that of Consolidated Denison with its 6,000-ton plant, the largest single uranium plant in the world. Northspan holds the largest contract (\$275,000,000) with Eldorado Mining and Refining. Capital outlays to bring the eleven plants in the area into production are estimated at \$275,000,000. A model townsite, Elliot Lake, is under construction and is expected to have a population of 30,000 by 1960.

Uranium production is also coming from the Bancroft area in the southeastern part of the Province where three companies, Bicroft Uranium Mines Limited, Faraday Uranium Mines Limited, and Greyhawk Uranium Mines Limited started to produce during the review period and a fourth, Canadian Dyno Mines Limited, was scheduled to start in April 1958. The Greyhawk mine is shipping its ore to the nearby Faraday mill for treatment. Bicroft and Faraday are each operating 1,000-ton plants while Canadian Dyno is erecting a 1,100-ton plant.

Ontario's output of cobalt comes from the cobalt and silver ores of the Cobalt-Gowganda area in northern Ontario and as a by-product from the nickel-copper ores of the Sudbury district. Production in 1956 at 3,574,000 lb. valued at \$9,055,000 was slightly higher than in 1955. Cobalt ore shipments from the Cobalt-Gowganda area were made chiefly to Deloro Smelting and Refining Company Limited at Deloro, Ont. The ores and concentrates were sold under the Canadian Government's premium price plan on behalf of the United States Government. The plan had been in effect since the start of the Korean emergency in 1951 and was terminated at the end of 1956. International Nickel continued to produce high-purity electrolytic cobalt at its Port Colborne refinery. Deliveries of cobalt in all forms by the Company in 1956 amounted to 1,543,000 lb. while Falconbridge Nickel delivered 543,000 lb.

About 70 p.c. of the Province's production of silver comes from the Cobalt area and the remainder as a by-product from nickel and lode gold mines. Output in 1956 amounted to 6,479,000 oz. t. valued at \$5,812,000.

Gold production in Ontario came from thirty gold mines in the Patricia, Thunder Bay, Porcupine, Kirkland Lake and Larder Lake areas and as a by-product from the base-metal mines in the Sudbury area. The 1956 production of 2,498,000 oz. t. was slightly lower than in 1955 but output during the first half of 1957 showed a slight increase over the same period in 1956. One mine, that of Starrat Nickel Mines Limited in the Red Lake area, ceased production in 1956 because of the exhaustion of ore reserves. Kerr-Addison Gold Mines Limited in the Larder Lake area, Canada's leading gold producer, in 1956 recorded an all-time high production of 473,000 oz. t., an increase of 46,000 oz. t. over the 1955 output.

A minor production of lead and zinc concentrates came from the zinc-lead-silver property of Jardun Mines Limited, 18 miles northeast of Sault Ste. Marie. New zinc production from the Manitouwadge area started in July 1957 from Willroy Mines and was scheduled to start later in the year from Geco Mines.

Quebec.—Mineral development activity in Quebec reached new peaks during the review period resulting in a marked increase in the Province's metal-producing capacity and confirming its great potentiality as a producer of iron ore and of base metals. Fresh proof of the tremendous wealth of Quebec's varied and extensive mineral resources was found in the discovery in northern Ungava of widespread nickel occurrences in a mineralized belt of rocks extending from Cape Smith on Hudson Bay to Wakeham Bay on Hudson Strait and, in western Quebec, of copper-zinc deposits in the Bell River-Mattagami Lake area. A record 55,523 claims were staked in the Province in 1956.

Quebec ranked second among the provinces in value of mineral production in 1956. Its total mineral output rose almost 20 p.c. above 1955 to \$426,608,000 and the value of its metal production 28 p.c. to \$236,213,000 which was only \$43,000,000 short of the total value of the Province's mineral output in 1954. Quebec is the second largest producer of copper, gold, iron ore, and zinc and the only producer of molybdenite and of titanium ore, the latter being from the large deposits of ilmenite at Allard Lake. Silver, selenium, magnesium, lead and bismuth make up the remainder of the Province's metal production.

Quebec is rapidly becoming a major world source of iron ore. Production in 1956 jumped 90 p.c. in volume over 1955 to 6,960,000 long tons and more than doubled in value to \$56,203,000. Developments under way at various properties indicate an output several times this size and value within the next decade.

With the exception of a minor tonnage from Quebec Iron and Titanium Corporation, production in 1956 came from the operations of Iron Ore Company of Canada in New Quebec-Labrador. This Company mined over 12,000,000 long tons of iron ore, more than 60 p.c. of which came from the Gagnon and French mines in Quebec. The ore was shipped by rail 360 miles to Sept-Îles on the north shore of the St. Lawrence and then by boat mainly to United States. A total of 2,757,712 tons was shipped through the St. Lawrence canal system to Great Lakes ports, with transshipment at Contrecoeur, near Montreal. Of the 1956 output, 9,447,000 tons went to the United States, 1,470,000 tons to the United Kingdom, and 391,000 tons to western Europe; 704,000 tons were utilized in Canada. A new mine, the Ferriman, scheduled for production in 1957, and total shipments from Sept-Îles are estimated at more than 13,000,000 tons for that year.

In addition to Iron Ore Company's large high-grade deposits in New Quebec-Labrador, Quebec has huge tonnages of low-grade iron-bearing material, several deposits of which are being developed toward production. These include the concentrating-grade magnetite deposit of the Hilton Mines, formerly known as the Bristol Mines, about 40 miles northwest of Ottawa, and the holdings of The Cartier Mining Company Limited, a subsidiary of United States Steel Corporation, in the Mount Reed-Mount Wright area about 300 miles northeast of Quebec City. Mining at the Hilton Mines, which is scheduled to start late in 1957, will be by open-pit methods at an annual rate of 600,000 tons of iron ore pellets containing about 66 p.c. iron.

The Cartier Mining Company plans to spend over \$200,000,000 to bring its large, low-grade iron ore deposits into production. Initial output is expected in 1961 at an annual rate of 3,000,000 tons with expansion to 10,000,000 tons possibly by 1965. Eventual output from the Company's operations in the general area could reach several times this figure. Present plans call for the construction of a 150-mile private railway into the area from Shelter Bay on the north shore of the St. Lawrence River.

Exploratory work, including geophysical examination, was done on several properties in the favourable iron-bearing formations which extend in an almost continuous arc from the most northerly tip of the west coast of Ungava Bay to the Mistassini area. At the southern end of the arc, a number of companies, including Jones and Laughlin Steel Corporation, Pickands Mather and Company, Iron Ore Company of Canada, The Steel Company of Canada and Canadian Javelin Limited have extensive holdings.

At the far northern end, west of Ungava Bay, Atlantic Iron Ores Limited and International Iron Ores Limited, both controlled by Cyrus S. Eaton interests of Cleveland, Ohio, and Oceanic Iron Ore of Canada Limited and Consolidated Fenimore Iron Mines Limited have outlined large reserves of concentrating-grade iron ore. The first two companies are negotiating with German steel interests for the sale of concentrates from their properties.

Most of Quebec's base-metal production comes from the western part of the Province, the chief source of output being the Horne mine of Noranda Mines Limited. The Province's output of copper jumped 21 p.c. in volume over 1955 to 244,918,000 lb. in 1956 and 36 p.c. in value to \$101,396,000 because of the high price of copper prevailing in 1956 and the addition of production from new properties. Zinc and lead showed declines in output below 1955, zinc decreasing from 202,862,000 lb. to 175,809,000 lb. and lead from 11,216,000 lb. to 5,629,000 lb.

Noranda Mines treats ore from its Horne mine and custom ores and concentrates from other copper, gold and silver mines. It recovers the copper and precious metals from the anodes at the electrolytic copper refinery of its subsidiary, Canadian Copper Refiners Limited, at Montreal East. Of the 101,406 tons of copper, 413,390 oz. t. of gold, and 2,280,400 oz. t. of silver produced by the Company in 1956, 26,308 tons of copper, 199,630 oz. t. of gold and 779,800 oz. t. of silver were credited to the Horne mine. Expansion initiated by Noranda in 1956 will raise its copper-smelting capacity from 240,000,000 lb. to 350,000,000 lb. a year and will open up a new open-pit operation nearby. The capacity of the Montreal East plant was raised from 17,000 tons to 21,000 tons of refined copper a month.

New copper production amounting to 55,234,000 lb. in 1956 came from Noranda's subsidiary, Gaspé Copper Mines Limited, on Gaspé peninsula, which had completed a 6,500-ton concentrator and smelter in 1955. Operations in 1956 were hampered by a three-month suspension in the supply of hydro-electric power and by a shortage of mine labour. In March 1957, production was again interrupted by a strike which ended early in October 1957. A mine and mill rate of about 4,000 tons a day had been reached prior to the strike. The anodes are shipped to the refinery at Montreal East.

New production also came from the Chibougamau area which is shaping into one of Canada's major copper-producing areas. Output from the new 450-ton mill of Chibougamau Explorers Limited, Campbell Chibougamau Mines Limited, the area's largest producer, and Opemiska Copper Mines (Quebec) Limited was at a rate of well over 50,000,000 lb. a year at the end of the review period. Several other properties in the area were under development, some of which were near the production stage. One of these, Merrill Island Mining Corporation Limited had a 650-ton plant under construction on its property in Doré Lake.

Copper production in western Quebec came from the copper-zinc ores of Waite Amulet Mines Limited, Quemont Mining Corporation Limited, East Sullivan Mines Limited, Normetal Mining Corporation Limited, Golden Manitou Mines Limited; from the new copper-gold mine of Rainville Mines Limited, 16 miles east of Val d'Or; from Beattie-Duquesne Mines Limited at Duparquet, which modified its gold mill to produce copper concentrates from its Hunter mine, and from Lyndhurst Mining Company Limited which started shipping ore to the Beattie-Duquesne mill. The remainder came from the operations of Weedon Pyrite and Copper Corporation Limited and Quebec Copper Corporation Limited in southern Quebec. Ascot Metals Corporation Limited closed its zinc-lead-copper Suffield mine near Sherbrooke owing to exhaustion of commercial ore.

Barvue Mines Limited, a zinc-silver producer in Barraute township of western Quebec, accounted for 48,602,000 lb. of zinc, the largest zinc output in Quebec in 1956. This was a decline of 22,822,000 lb. from the Company's production in 1955. The conversion from open-pit to underground mining was completed, with underground production scheduled at 3,000 tons daily compared to 4,000 tons a day from open-pit operations. Operations at the property ceased early in October 1957.

Zinc production also came from the copper-zinc properties of Quemont, Normetal, Golden Manitou, Waite Amulet, East Sullivan and Weedon Pyrite mentioned above and from West Macdonald Mines Limited in Rouyn-Noranda County and New Calumet Mines Limited, a zinc-lead-gold-silver producer on Calumet Island in the Ottawa River. Zinc concentrates produced in the Province are exported to the United States and Europe.

Lead concentrates were produced at three mines—New Calumet, Golden Manitou and Barvue—New Calumet being the largest producer.

Widespread exploratory activity in Quebec resulted in the discovery of a number of new sources of base-metal wealth. Attracting major attention were the nickel discoveries in northern Ungava where exploratory work disclosed several occurrences of nickel in a mineralized belt of rocks extending from Cape Smith on Hudson Bay to Wakeham Bay on Hudson Strait. Several companies were active in the area during 1957 and development work was done on some of the properties. In mid-1957 the discovery of copper-zinc deposits in the Bell River-Mattagami Lake area touched off a staking rush into that area.

Quebec produced 1,032,000 oz. t. of gold in 1956. Sixty-six per cent of the output came from lode gold mines and the remainder from base-metal operations. Output from the latter was greater than in 1955 because of increased production from the copper-gold mines in the Chibougamau area. Three lode gold mines—Beattie-Duquesne, O'Brien Gold Mines Limited and Sullivan Consolidated Mines Limited—ceased production in 1956 leaving ten in operation.

Molybdenite production comes from Molybdenite Corporation of Canada Limited about 25 miles northwest of Val d'Or, the sole Canadian producer. Output in 1956 totalled 1,452,000 lb. In December 1956, the Company began the production of molybdc oxide, which will lead to a decrease in imports of the oxide by Canadian steel plants.

Quebec Iron and Titanium Corporation continued to operate at Sorel its experimental smelting plant for the treatment of ilmenite ore from the deposits at Allard Lake, which are among the largest known in the world. Production is in the form of titanium dioxide concentrate and pig iron. Production of titanium dioxide slag at Sorel in 1956 amounted to 209,513 tons containing 150,640 tons of titanium dioxide. Most of the slag produced was exported to United States for the titanium pigment and welding-rod industries. Early in 1957 the Company announced its intention to increase by 60 p.c. production of titanium dioxide slag at its Sorel plant because of the increased demand for slag for processing into titanium dioxide pigment used extensively in paint and paper products and for processing into titanium metal.

The Maritimes.—Major attention in metal mining continued to be directed to the Bathurst-Newcastle lead-zinc area of northeastern New Brunswick which promises to become one of Canada's major base-metal camps. In western New Brunswick, plans were under way to proceed with the development of the deposits of manganese in the Woodstock area. Meanwhile, the two former sources of base-metal production—Keymet Mines Limited, 18 miles northwest of Bathurst in New Brunswick, and Mindamar Metals Corporation Limited on Cape Breton Island in Nova Scotia—ceased production because of the exhaustion of ore. Prince Edward Island has no mineral production.

Exploratory and development activity in the Bathurst-Newcastle area continued at a high level during most of the review period, declining somewhat only in mid-1957 because of low metal prices. Heath Steele Mines Limited, the area's first major producer, commenced operations early in 1957. Several properties, including those of Brunswick Mining and Smelting Corporation Limited, were brought nearer to the production stage, and intensive exploration brought to light a number of major new orebodies.

Heath Steele Mines, a subsidiary of American Metal Company, brought its lead-zinc-copper property some 34 miles northwest of Newcastle into production in February 1957 and by late June was treating 1,200 tons daily in its 1,500-ton mill. A 22-mile railway from Bartibog on the main line of the CNR was scheduled for completion toward the end of 1957. Brunswick Mining and Smelting reported encouraging progress in the intensive research being carried out on its metallurgical problem. It continued development work

on its two orebodies and started on the design of a plant with an initial production of 2,000 tons daily. Anacon Lead Mines Limited and Sturgeon River Mines Limited continued underground development of their properties in the Bathurst area. In the same area, Nigadoos Mines Limited began shaft-sinking on its lead-zinc property. Anaconda Company (Canada) Limited, 30 miles west of Bathurst, and Middle River Mining Company Limited, 12 miles west of Heath Steele, each outlined major sulphide orebodies. Total ore reserves of the various mines in the area calculated to 1,000-foot depth were estimated at over 100,000,000 tons.

In the Woodstock area, Strategic Manganese Corporation Limited, a subsidiary of Stratmat Limited, is working out plans to build a \$15,000,000 electric smelter with an initial capacity of 70,000 tons of ferromanganese and 60,000 tons of iron a year. Metallurgical test work on concentrates from the Company's large low-grade manganese deposit using the Udy process, was carried out in the pilot plant of Strategic-Udy Metallurgical and Chemical Processes Limited at Niagara Falls, Ont., and later at a semi-commercial plant.

The value of metal production in New Brunswick dropped from \$316,000 in 1955 to \$159,000 in 1956 because of the closing of the Keymet lead-zinc-silver mine which had been in production since early in 1954, and the cessation of shipments of tungsten concentrates from the property of Burnt Hill Tungsten and Metallurgical Limited near Napadogan in western New Brunswick.

In Nova Scotia, the value of metal output fell from \$3,884,000 in 1955 to \$1,005,000 in 1956 with the closure of the Stirling lead-zinc-copper mine by Mindamar Metals. The property, which had been in production since 1952, had an annual output valued at about \$3,000,000.

Newfoundland.—Newfoundland in 1956 was Canada's leading source of iron ore. Output which came from the Labrador operations of Iron Ore Company of Canada and of Dominion Wabana Ore Limited on Bell Island increased 21 p.c. in volume and 26 p.c. in value over 1955 to 7,814,000 long tons valued at \$57,699,000. The remainder of the Province's metal production comprises zinc, lead, copper, silver and gold, in order of value, from the operations of Buchans Mining Company Limited near Red Indian Lake in central Newfoundland. The value of metal production in Newfoundland in 1956 jumped 29 p.c. over 1955 to \$79,858,000. The value of all mineral output in 1956 was \$87,752,000.

Iron Ore Company of Canada shipped 12,023,000 long tons of direct-shipping ore from its New Quebec-Labrador deposits in 1956. Of this, 4,058,000 long tons or 52 p.c. of the Province's output, came from the Company's Ruth and Gill mines in Labrador. The Company began operations in 1956 on May 1 and continued through a 203-day season until Nov. 19. The Gill mine spur and yards were completed during 1956. (For other details of the Company's operations and production during the review period, *see* p. 503.)

Dominion Wabana, a subsidiary of Dominion Steel and Coal Corporation, shipped 2,654,000 long tons of beneficiated hematite in 1956. Of this, 490,000 tons went to the parent Company's plant at Sydney, N.S., 1,029,000 tons went to the United Kingdom, 1,039,000 tons to West Germany and the remainder to the Netherlands, France and the United States. The Company has contracted for the sale of ore up to and including 1961 and, to meet these commitments, must produce at least 3,000,000 tons of ore annually. Mechanization of mine and surface operations, a \$22,000,000 program started in 1950, was completed in 1956.

Additional iron-ore production is indicated from the holdings of Canadian Javelin Limited in the Wabush Lake area of Labrador immediately south and adjacent to the Labrador concession of Iron Ore Company of Canada. According to Company estimates, the Canadian Javelin 4,700-sq. mile concession contains huge reserves of concentrating iron ore. Early in 1957, the Company announced agreements with Pickands Mather and Company and other United States steel companies to develop large portions of its holdings. At the close of the review period in June 1957, it was understood that the Company was also negotiating with European steel interests to develop other areas not included in the previous agreements.

Buchans Mining Company milled 366,000 tons of zinc-lead-copper ore in 1956. The concentrates produced contained 74,280,000 lb. of zinc, 46,594,000 lb. of lead and 8,000,000 lb. of copper. The Company also produced 919,000 oz. t. of silver and 8,400 oz. t. of gold. The new MacLean shaft, planned for a depth of 4,000 feet, $1\frac{1}{2}$ miles northwest of the Buchans townsite, was started. In the Notre Dame Bay area, Maritimes Mining Corporation was on schedule in the pre-production development of the old Tilt Cove copper property. A new 2,000-ton concentrator was expected to be ready for operation in September 1957. Ore reserves were reported in March 1956 at 3,941,700 tons averaging 2.05 p.c. copper.

Subsection 2.—Industrial Minerals*

There were important developments in the industrial mineral field during 1956 and 1957. Production records were established for many of the minerals and a number of new deposits were opened up. Especially noteworthy were the developments in the Canadian sulphur industry and the progress made toward production of potash from the rich and extensive deposits in Saskatchewan.

Sulphur.—Pyrite and pyrrhotite together with smelter gases have been the main sources of sulphuric acid and sulphur dioxide in Canada and are accounting for increasing quantities of sulphur products. However, with the development of the natural gas resources of Western Canada a new source of elemental sulphur is coming into being which will in the near future become the main source of sulphur in the country.

Some of the largest gas fields of Western Canada contain gas of the 'sour' variety, that is, gas with a relatively high content of sulphur in the form of hydrogen sulphide. The hydrogen sulphide must be removed from the gas before it is fed to the gas transmission lines. In this process elemental sulphur is obtained. The content of hydrogen sulphide is as high as 37 p.c. in some of the sour gas in Alberta. From every million cubic feet of hydrogen sulphide about 40 short tons of extremely pure sulphur can be obtained, and at a cost comparable with that of obtaining sulphur by the Frasch process.

Prior to 1956 there were two small sulphur recovery plants operating on sour gas in Alberta, producing 110 long tons of sulphur daily. In 1956, Imperial Oil Limited built a plant at the Redwater oilfield north of Edmonton capable of producing 20 long tons of sulphur per day, and late in the same year The British American Oil Company Limited completed a plant at Pincher Creek, Alta., having an initial capacity of 225 long tons of sulphur daily and an eventual capacity of 800 long tons daily. Also in 1956, Jefferson Lake Sulphur Company of New Orleans, La., the third largest sulphur producer in the United States, commenced construction of a plant at Taylor, B.C., to produce 425 long tons of sulphur per day from gas supplied by Pacific Petroleum Limited. This plant, scheduled for operation in November 1957, may be increased in output to 800 long tons per day in 1959. Six other sulphur recovery plants having a total minimum daily productive capacity of 2,400 long tons are proposed for Alberta within the next few years and, provided the present plans of gas transmission companies are carried out, it is possible that 1,000,000 tons of sulphur will be produced annually from natural gas in Western Canada by 1961.

In Montreal a plant to produce 100 long tons of sulphur daily from oil refinery gas, constructed by Laurentide Chemicals and Sulphur Limited is expected to be in operation late in 1957.

Reference has been made in previous Year Books to the Noranda process for converting pyrite and pyrrhotite into sulphuric acid, sulphur, and iron sinter. This process is working successfully at Port Robinson and at Cutler in Ontario. The sulphuric acid plant at Cutler has a daily capacity of 1,000 tons of sulphuric acid and serves the uranium industry in the Blind River district.

Sulphuric acid and liquid sulphur dioxide have also been produced from smelter gases for a number of years. Currently, The International Nickel Company of Canada Limited and the Texas Gulf Sulphur Company are jointly investigating the economics

* Prepared by M. F. Goudge, Chief, Industrial Minerals Division, Department of Mines and Technical Surveys.

of producing elemental sulphur from the sulphur-rich gases of the Nickel Company's new iron-ore recovery plant at Copper Cliff, Ont. The significance of these and of other prospective developments is that within a few years Canada may become second among world producers of sulphur and will have a substantial tonnage available for export. At present Canadian industry imports about one-half of its requirements. Production of sulphur or its equivalent from all sources in Canada in 1956 was 798,520 short tons.

Potash.—It is expected that by 1959 Canada will have become a major producer of potash. The potash deposits of Saskatchewan, discovered in 1943 by Imperial Oil Limited during exploratory drilling for petroleum, have in recent years been intensively prospected by means of core-drills and are now believed to be the largest and richest in the world. In mid-1957, seventeen companies financed by capital from Canada, the United States, Germany and France, held land in the so-called potash belt, and a number are actively engaged in the exploration of their holdings. Two companies—Potash Company of America Limited and International Minerals and Chemical Corporation (Canada) Limited—are sinking shafts to the deeply buried deposits and are building large surface plants in which to prepare the potash for industrial use. The expenditure involved will be in the neighbourhood of \$30,000,000 for each company. A Canadian company—Western Potash Limited (now Continental Potash Corporation Limited)—sank a shaft near Unity, Sask., to a depth of 1,170 feet, but at present this company is inactive.

The potash deposits occur at or near the top of a vast bed of rock salt that underlies most of the Prairies. The potash is at depths of from 2,550 to 7,000 feet, but is nearest the surface (2,550 to 3,500 feet) in a belt 35 to 50 miles wide and nearly 400 miles long that extends diagonally across the Province from the Manitoba border north of Moosomin, to the Alberta border near Manito Lake. The deposits are not known to extend into Alberta but have been found in Manitoba within 15 miles of the Saskatchewan border. The predominant potash mineral is sylvite but in the vicinity of the Quill Lakes some beds of carnallite over 30 feet thick have been found. Beds of intermixed sylvite and rock salt (referred to as sylvinite) over 10 feet thick and containing the equivalent of over 25 p.c. of K_2O are common, and some beds containing the equivalent of 40 p.c. of K_2O are reported.

As a result of exploration most of the activity is now confined to two main areas. The first of these extends from west of Saskatoon to the Quill Lakes. In this area Potash Company of America Limited has its holdings and is sinking a shaft at Patience Lake 14 miles east of Saskatoon.

The second area is south of Yorkton in the eastern part of the Province. At Esterhazy in this district, International Minerals and Chemical Corporation (Canada) Limited has begun sinking a shaft to the potash deposits which here are 3,000 feet beneath the surface.

Estimates made by competent authorities of the tonnage of high-grade potash occurring in Saskatchewan have run as high as 5,000,000,000 tons. In any case it is now known that the deposits are among the largest in the world and in quality they probably surpass all others.

Asbestos.—The asbestos industry is still growing. A major expansion program which began after the end of World War II resulted in productive capacity being more than doubled. Shipments in 1956 totalled 1,014,249 tons valued at \$99,859,969—a new record in value and a near record in quantity. The Canadian asbestos industry supplies over 60 p.c. of the world's requirements of asbestos fibre. The 5,000-ton mill of Lake Asbestos of Quebec Limited under construction at Black Lake in the Eastern Townships of Quebec when placed in operation in late 1958 will add over 100,000 tons of fibre to the Canadian annual production. National Asbestos Mines, a subsidiary of National Gypsum (Canada) Limited, is constructing a mill of 3,000 tons daily capacity just east of Thetford Mines. The largest addition to milling capacity is being made by Canadian Johns-Manville Company at Asbestos, Que., where the annual capacity of its new mill, already the largest in the world, is being increased by one-third to 825,000 tons of fibre. Several other asbestos producers are building new mills with greater capacities than the mills they will replace. Promising deposits are under examination in Newfoundland, the Yukon Territory, and northern British Columbia.

Barite.—Demand for barite remains high and production topped all previous records in 1956 when 320,825 tons valued at \$3,031,034 were shipped; 96 p.c. came from the mine of Magnet Cove Barium Corporation at Walton, N.S. After being crushed and washed, the barite from this deposit is shipped by boat to plants on the shores of the Gulf of Mexico and in South America where it is ground for use in making heavy drilling muds needed to combat high pressures encountered in drilling deep oil wells.

Cement.—The annual productive capacity of the Canadian Portland cement industry increased by 5,000,000 bbl. to a total of 42,000,000 bbl. in 1957 through the addition of kilns to existing plants and the construction of two new cement plants, one built by Lake Ontario Cement Company Limited at Picton, Ont., with a rated yearly capacity of 1,800,000 bbl. and one by Lafarge Cement of North America Limited at Vancouver with a rated yearly capacity of 1,300,000 bbl. Production (shipments) of cement in 1956 amounted to 28,695,331 bbl. valued at \$75,233,321, a record both in quantity and in value.

The Canadian cement industry has increased its production capacity threefold since the end of World War II, but even so has been unable, until 1957, to supply the domestic demand. In recent years it has been necessary to import between 2,300,000 and 3,400,000 bbl. a year. Demand for cement has been accentuated by the heavy requirements of such great engineering works as the St. Lawrence Seaway and Power Project which is using nearly 5,000,000 bbl., most of it from Canadian plants. From 1956 on it is anticipated that only very small imports of cement will be required and efforts will be made to develop an export market for any surplus production.

Clay Products.—Clay products include brick, tile, ceramic pipe, pottery, porcelain and certain types of refractories. Nearly 200 plants are engaged in the manufacture of these products in Canada. Value of production in 1956 reached a record of \$37,784,980. In the larger plants of this industry from Newfoundland to British Columbia a changeover is in progress from periodic and old-type continuous kilns to modern tunnel kilns fired by oil or gas. These tunnel kilns, though high in initial cost, permit better control and greater efficiency. The widespread use of the tunnel kilns is largely related to the imminent availability of natural gas for fuel.

Fluorspar.—Production of fluorspar reached a new high both in quantity and in value in 1956 when 140,071 tons valued at \$3,407,582 were shipped. The most important uses of this mineral are as follows: (1) in the production of sodium aluminum fluoride for use in the aluminum industry; (2) flux in the manufacture of steel; (3) for ceramic purposes. The two principal producers of fluorspar have their mines at St. Lawrence in the Burin Peninsula of Newfoundland. A large part of the Canadian production in recent years was exported to the United States where much of it was stockpiled as a strategic mineral. The removal of fluorspar from the list of minerals to be stockpiled will result in a much lower production in 1957.

Gypsum.—Production of gypsum attained a new high in 1956 when 4,895,811 tons valued at \$7,260,236 were shipped from Canadian quarries, most of it going out of the country in the crude state. It is used principally for wallboard, wall plaster, sheathing board, lath, and tile. The largest deposits are in Nova Scotia from where 84 p.c. of the Canadian production is obtained. In 1956 a new quarry was opened near Windsor, N.S., by Canadian Gypsum Company Limited which will bring the Company's productive capacity up to 11,000 tons per day on a single shift basis. Gypsum has been quarried in this vicinity for well over 100 years and the quarries are among the largest in the world. The gypsum is shipped by boat to the Company's plants along the Atlantic Coast of the United States where it is made into various products.

Lime.—The Canadian lime industry is anticipating the greatest production in its long history in 1957, surpassing the previous record production of 1,331,118 tons valued at \$15,810,904 achieved in 1955. Through the ages lime has been regarded as a construction material and its chief functions were as a plastic binder in masonry and as plaster for walls. These uses now account for only 10 to 15 p.c. of the output—the remainder is

marketed for chemical uses. There is a particular demand for it in the processing of uranium ores. The uranium mills of the Blind River district of Ontario alone will require an estimated 700 tons of lime per day when they are all in operation. To supply this lime the plant of Gypsum Lime and Alabastine Canada Limited at Beachville, Ont., has been enlarged and a new lime plant has been built by North American Cyanamid Limited also at Beachville. Lime for uranium processing is also obtained as a co-product at the magnesia plant of Aluminum Company of Canada at Wakefield, Que.

Spodumene.—A new industrial mineral product was added to the list of those produced in Canada late in 1955 when Quebec Lithium Corporation brought its spodumene deposit near Val d'Or into steady production. Production of lithia in 1956 amounted to 4,789,360 lb. valued at \$2,643,950. The entire production of about 200 tons of concentrates per day is sold under a five-year contract to Lithium Corporation of America at Bessemer, North Carolina. The flotation process that produces the spodumene concentrates also produces feldspar as a co-product. This feldspar, which is a mixture of the soda and potash varieties, can be produced at the rate of 175 tons per day.

Salt.—Production and exports of salt have risen very rapidly since 1954. In 1956 a record 1,590,804 tons valued at \$12,144,476 was produced and a record 333,935 tons valued at \$2,286,830 was exported. Prior to 1955 exports of salt from Canada were very small. In that year Canadian Rock Salt Company started production of rock salt from a new mine at Ojibway, Ont., at the rate of 500 tons per hour, which accounts for the greatly increased annual output. Another rock salt mine is being developed at Pugwash, N.S., by the Malagash Salt Company. Difficulties in sinking the shaft to the salt, which, is at a depth of 400 feet, have delayed the opening of this mine which was originally planned for 1957. Dominion Tar and Chemical Company Limited of Montreal through its subsidiary, Sifto Salt Limited, has also started shaft sinking near Goderich, Ont., with the intention of mining a 20-foot bed of pure rock salt found in that locality.

The mining of rock salt on a large scale brings about a major change in the salt industry of this country. Heretofore most of the salt has been obtained by introducing water to deeply buried salt beds and pumping up the resultant brine. The brine was either used as such by nearby industries or the salt was recovered from it by evaporation. Rock salt is a much cheaper product and can be employed for most industrial purposes. Its availability will aid the salt-using chemical industries of Canada.

Sand and Gravel.—The quantity of sand and gravel used in Canada in 1956 was 148,801,268 tons, which far exceeds the tonnage of any other mineral substance marketed. Its value at \$81,457,352 was exceeded by that of only eight mineral products. Favoured by the steadily increasing strictness of specifications for sand for use in concrete, and by the increasing difficulty of obtaining suitable material in quantity from natural deposits, a new industry has developed recently. This is the industry engaged in the manufacture of sand from suitable rocks adjacent to major construction projects, and adjacent to cities where large quantities of sand are required. The requirement of nearly 3,000,000 tons of sand for the concrete of the St. Lawrence Seaway and Power Project was largely filled by manufacturing it from limestone and sandstone obtained nearby. The same deposits also supplied most of the 4,000,000 tons of crushed stone used.

Subsection 3.—Petroleum and Natural Gas*

The rapid development of Canada's petroleum and natural gas resources, initiated by the Leduc oil field discovery of 1947, continues unabated. At the end of 1956 proved reserves of crude oil and natural gas liquids totalled 3,129,304,000 bbl. compared with 72,000,000 bbl. at the end of 1946 and during the intervening ten-year period production amounted to 657,605,839 bbl. In 1956 the new oil found was more than three times the actual production which, at 170,569,200 bbl., was more than twenty-two times the 1946 output. Natural gas reserves in 1956 were in excess of 23 trillion cu. feet compared with

* Prepared under the direction of Dr. Marc Boyer, Deputy Minister of the Department of Mines and Technical Surveys, by R. B. Toombs, Head, Mineral Economics Section, Mineral Resources Division. A survey of oil and gas pipelines will be found in the Transportation Chapter.

4.7 trillion in 1950. Crude oil has, since 1953, maintained its lead in annual production value for all minerals produced in Canada and natural gas is entering a period of rapid growth.

Canadian crude oil production increased by 32.9 p.c. in 1956 over 1955 and by mid-1957 a somewhat smaller advance was indicated for that year. Alberta accounted for 83.6 p.c. of Canada's crude oil production in 1956. Saskatchewan's share, which is increasing steadily, was 12.3 p.c. Manitoba contributed 3.5 p.c. and Ontario, the Northwest Territories, New Brunswick and British Columbia the remainder. British Columbia's first commercial output of crude petroleum took place in 1956.

The size and rate of recent growth of crude oil production in Western Canada is indicated by the following figures:—

<u>Item and Date</u>	<u>Alberta</u>	<u>Saskatchewan</u>	<u>Manitoba</u>
NUMBER OF OIL WELLS—			
December 1954.....	5,068	1,094	284
December 1955.....	6,138	1,655	554
December 1956.....	7,390	2,414	736
NUMBER OF OIL FIELDS—			
December 1954.....	65	30	6
December 1955.....	74	37	11
December 1956.....	86	46	12

Expenditures in Western Canada on exploration and oil-field development programs exceeded \$600,000,000 in 1956. At the end of the year land holdings by oil companies totalled 314,000 sq. miles and exploration carried out included the drilling of 899 exploratory wells. Geophysical work was widespread and, in terms of geophysical party employment, amounted to 1,484 crew-months of which 70 p.c. was in Alberta, 20 p.c. in Saskatchewan and most of the remainder in British Columbia. Total drilling of all categories amounted to 15,749,949 feet in 3,359 oil wells, gas wells and dry holes. Of the total number of wells drilled, 71 p.c. were classified as oil wells, 5.5 p.c. as gas wells and 23.5 p.c. as dry holes. An average of 222 drilling rigs were in use in Western Canada throughout the year.

Exploration programs are being actively continued in Ontario and Quebec, particularly in the search for natural gas. Drilling in southwestern Ontario is being extended out into Lake Erie, and in Quebec geophysical work and drilling are under way in the region between Montreal and Quebec City. In all, 431 holes were drilled in Ontario in 1956, resulting in 157 gas wells and 57 oil wells. Thirteen exploratory wells were drilled in Quebec.

Details of oil and gas field activities by province during 1956 and the first half of 1957 follow.

British Columbia.—In 1956 and 1957 British Columbia's natural gas resources were under rapid development in preparation for initial operation of the Westcoast Transmission Company gas pipeline from the Peace River area to the Pacific Coast. Gas reserves of four trillion cubic feet have been established and northeastern British Columbia is now considered to be one of the important gas sources of North America. Zones of all ages down to and including those of Devonian age have been indicated as potential gas sources. The Fort St. John gas field, where 23 gas wells were completed in 1956, has the largest reserves in the Province and all other fields are within 50 miles of this field. Exploratory drilling is spreading northward from the Fort St. John area; in 1956 one of the 13 successful exploratory wells was drilled at a location 160 miles north-northwest of Fort St. John. At the end of the year, land holdings by exploration companies totalled 43,000 sq. miles. A large gas-processing and sulphur-recovery plant was under construction in the Peace River area.

British Columbia's first oil field was developed in 1956 and oil exploration carried out in 1957 indicated that the Province would soon move up from seventh to fourth place among the oil-producing regions in Canada.

Alberta.—Alberta produced 143,900,000 bbl. of crude oil in 1956, an increase of 27.3 p.c. over 1955. Many exploratory wells were drilled in the western part of the Province during 1956, particularly to test the oil and gas potential of Upper Cretaceous, Lower Cretaceous, Mississippian and Devonian formations in and near the deep Alberta Syncline of western Alberta. Two-fifths of the successful exploratory oil wells found production in Upper Cretaceous formations and one-quarter in the Lower Cretaceous; Mississippian and Devonian oil discoveries together accounted for one-quarter of exploratory successes. Triassic and Pre-Devonian wells made up the remainder. Whereas oil reserves were formerly largely confined to formations of Devonian age, an important oil reserve diversification is now developing throughout the geological sequences of the Western Canada sedimentary basin. The Cardium sand of Upper Cretaceous age, which is being extensively developed in the Pembina field southwest of Edmonton, was found to be productive in 1956 at such widespread locations as the southern part of the Peace River area 175 miles north of Pembina, and at Crossfield 18 miles north of Calgary. Another important exploratory event in 1956 was the drilling of the Union Red Earth 12-17 well, 85 miles east-northeast of Peace River town. Much land was taken up in northern Alberta and Saskatchewan following the drilling of this well and the search for oil in the "Granite Wash" formation overlying the Precambrian basement rocks is under way.

Oil-field development proceeded actively in Alberta during 1956 with the Pembina field continuing to account for a large share of the work. This field is now Canada's largest oil producer and one of the major oil sources of North America. At the end of 1956 it had 1,680 wells compared with 808 a year previously. The South Sturgeon Lake field in the Peace River area, the Joffre and Bentley fields near Red Deer in central Alberta, and the Harmattan field near the Sundre and Westward Ho fields northwest of Calgary were the other most actively developed fields in Alberta during the year. Pipeline transportation facilities were completed for these fields in 1956.

Particular attention was paid to oil conservation measures in several oil fields during 1956. In the Pembina field, water injection operations were commenced to ensure a greater ultimate recovery than would be possible by relying only on the primary producing energy in the oil reservoir. The pressure maintenance technique being used is designed to arrest reservoir pressure declines and may provide for the recovery of an additional 560,000,000 bbl. of oil in addition to the 520,000,000 bbl. of primary recoverable reserves in the field as it is now known. Secondary recovery methods are also in use in the Golden Spike, Leduc-Woodbend, Redwater, Westrose and Turner Valley fields. Close supervision of all oil fields in Western Canada is maintained by the Provincial Government to ensure that field operating procedures are in accordance with the best conservation practices.

In 1956, 134 gas wells were completed successfully. Fifty-four of these were field-development wells and the remainder, exploratory. In the past, large gas reserves were developed at the Pincher Creek, Savanna Creek, Jumping Pound, Sarcee, Harmattan-Elkton, Homeglen-Rimbey, Windfall and Chinook Ridge fields and current exploration programs continue to confirm the prospects for a large natural gas reserve growth in western and northwestern Alberta. Twelve of the natural gas discoveries made in 1956 immediately indicated reserves of 10 billion cu. feet or greater. Most of these are on the western side of the Province. Large reserves have also been built up in the plains region of the eastern half of the Province at such fields as Princess, Bindloss, Cessford, Provost and Nevis where relatively shallow drilling is an incentive to continuing search. The recent successful exploratory and development drilling throughout Alberta raised natural gas reserves from 15,600 billion cu. feet in June 1955 to 18,300 billion cu. feet by September 1956.

The present magnitude and rate of growth of natural gas reserves will ensure adequate supplies for Alberta as well as for the Trans-Canada gas pipeline project. Current reserves are estimated at four times the 20-year requirements of the Trans-Canada project.

A number of Alberta's fields produce "wet gas" and during 1956 the daily capacity of natural gas processing facilities was increased from 331,000,000 to 401,000,000 cu. feet. Ten processing plants were in operation in 1956 and a gas-cycling and sulphur-recovery plant was placed on stream in the Pincher Creek gas field early in 1957.

Saskatchewan.—The finding of crude oil in southeastern Saskatchewan, which commenced with the Midale field discovery in 1953 and the Frobisher field discovery in 1954, continues to be one of the most important accomplishments in Western Canada. The rapid oil-field development since 1954 has transformed Saskatchewan from a small producer of heavy and medium gravity crude oils to a comparatively large producer, with an increasing trend towards light oil output.

Oil fields in southeastern Saskatchewan are being developed on the northeastern rim of the Williston Basin, a large structural feature with its centre in North Dakota. Oil occurs in limestone formations of Mississippian age at depths of from 3,100 to 5,400 feet, the average well depth being approximately 4,100 feet. The oil is predominantly light gravity. The extensive data being obtained on the nature of oil occurrence in this part of Saskatchewan are assisting companies to proceed with field programs at a rapid rate and with much success. In 1956, 33 oil discoveries were made in Saskatchewan, 26 of them in the southeastern part of the Province. In 1956 some 550 oil wells were drilled in 16 fields and one-third of all drilling rigs in Western Canada were located within a 5,000-sq. mile area in the southeast corner of Saskatchewan. As a result of this intensive development program, Saskatchewan's crude oil reserves were increased by 48 p.c. during 1956. A number of the fields are close to each other and early in 1957 four of them were joined to form the Steelman field which, by mid-year, had 470 oil wells.

Producing fields on the west side of Saskatchewan are in the vicinities of Lloydminster, Kindersley and Swift Current. In 1956 there was considerable drilling in the Coleville heavy gravity field near Kindersley. Further development took place in the medium gravity oil fields southeast of Swift Current where crude oil is produced for an export market in St. Paul, Minnesota. Oil fields in western Saskatchewan produce from sandstone formations of Lower Cretaceous and Jurassic ages and the average well depth is 3,000 feet.

Until 1955 the comparatively small Smiley field in western Saskatchewan was the Province's only light gravity crude oil producer, but by the end of 1956, as a result of developments in southeastern Saskatchewan, light gravity crude oil accounted for 35 p.c. of the provincial output, medium gravity crude for 48 p.c., and heavy crudes for 17 p.c. The increasing percentage of light gravity oil is giving Saskatchewan access to greater market outlets and thereby permitting rapid growth in production. Output of crude oil almost doubled in 1956, reaching 21,077,000 bbl., and by mid-1957 a similar rate of increase was indicated for that year.

All natural gas reserves are in fields on the west side of the Province and occur predominantly in formations of Cretaceous age. Six gas discoveries were made in 1956 and 26 field development wells were drilled. Saskatchewan's natural gas resources are much smaller than those of Alberta and British Columbia but good progress has been made in opening up Coleville, Brock and Unity field resources for use in Saskatoon, Prince Albert and other north-central communities. In 1956 the Success field was supplying natural gas to Moose Jaw and during 1957 this service was extended to Regina.

Manitoba.—Manitoba's crude oil production dates from 1951. During 1956 oil exploration was somewhat curtailed compared with the previous two years, but field drilling proceeded actively and production rose from 4,145,756 to 5,786,540 bbl. The three principal fields which account for 90 p.c. of the Province's output are in the immediate vicinity of the town of Virden, 23 miles east of the Saskatchewan border. At the end of 1956 these three fields had 86 p.c. of the 736 oil wells in Manitoba. Production comes from formations of Mississippian age. During 1956 and 1957 a search was being made in areas east of Virden for oil occurrences in other geological formations. There are no gas wells in Manitoba.

Yukon and Northwest Territories.—Development drilling was undertaken in the Norman Wells field during 1956 for the first time since the end of World War II. Four oil wells were completed in the field which is on the Mackenzie River, 90 miles south

of the Arctic Circle. There is no other crude oil and no gas production in the Northwest Territories nor any output of oil or gas in the Yukon Territory. Exploration is being continued, however, in a region west of the southwest end of Great Slave Lake and immediately north of the Alberta border.

Eastern Canada.—No oil discoveries of significance were made in *Ontario* during 1956 but field development drilling added appreciably to the oil potential. The Rodney field in Elgin County is the largest producer in Ontario. Provincial production remains small, although the output of 593,370 bbl. in 1956 was close to a record in Ontario's long history of oil field activity which dates from 1858.

The search for natural gas proceeds apace. Drilling in 1956 was under way in the counties of Haldimand, Kent, Welland and Norfolk, and offshore in Lake Erie in the general vicinity of Port Alma. By the end of that year, 34 successful gas wells had been drilled in Lake Erie as far as 4.5 miles from shore. Production of 12.8 billion cu. feet of natural gas from fields in Ontario, together with imports from United States of 16.5 billion cu. feet, supplied markets in Toronto and throughout southwestern Ontario.

In *Quebec*, exploration for oil and gas is being carried on by a number of companies in the St. Lawrence Lowlands between Montreal and Quebec City. Some favourable natural gas results were obtained during drilling in the St. Johns area in 1956 and in the Three Rivers area early in 1957.

The Stony Creek field near Moncton in *New Brunswick* is the only oil and gas field in the Atlantic Provinces. It produced 16,628 bbl. of crude oil and 190,000,000 cu. feet of natural gas in 1956. Minor development drilling was continued in the field.

Petroleum Refining and Marketing.—Forty-three refineries were in operation in Canada at the end of 1956, with a total daily crude oil throughput capacity of 700,050 bbl. The rapid rate of growth of petroleum refining in Canada in recent years is illustrated for each of the principal refining regions in the following tabulation.

PETROLEUM REFINING THROUGHPUT CAPACITY BY REGIONS

<i>Region</i>	<i>1939</i>		<i>1950</i>		<i>1956</i>	
	<i>Barrels per Day</i>	<i>p.c.</i>	<i>Barrels per Day</i>	<i>p.c.</i>	<i>Barrels per Day</i>	<i>p.c.</i>
Maritime Provinces.....	32,750	16.4	22,300	6.2	42,300	6.1
Quebec.....	64,500	32.2	143,000	39.9	247,000	35.3
Ontario.....	44,500	22.2	75,200	21.0	159,700	22.8
Prairie Provinces and N.W.T....	35,570	17.8	89,525	24.9	180,800	25.8
British Columbia.....	22,700	11.4	28,850	8.0	70,250	10.0
CANADA.....	<u>200,020</u>	<u>100.0</u>	<u>358,875</u>	<u>100.0</u>	<u>700,050</u>	<u>100.0</u>

The progress made in the marketing of Canadian crude oil in Canada is indicated as follows.

PERCENTAGES OF CANADIAN CRUDE OIL RECEIPTS AT REFINERIES

<i>Region</i>	<i>1939</i>	<i>1946</i>	<i>1950</i>	<i>1956</i>
	<i>p.c.</i>	<i>p.c.</i>	<i>p.c.</i>	<i>p.c.</i>
Maritime Provinces.....	—	—	—	—
Quebec.....	—	—	—	0.3
Ontario.....	0.4	0.5	1.0	84.5
Prairie Provinces and N. W. T.....	37.0	52.5	99.0	100.0
British Columbia.....	—	—	—	100.0
CANADA.....	<u>3.5</u>	<u>10.0</u>	<u>24.4</u>	<u>54.1</u>

During 1956 Canadian refineries received 231,897,606 bbl. of crude oil, of which 125,592,074 bbl., or 54.1 p.c., were from Canadian sources. The percentage of domestic receipts in Ontario is steadily rising. At the same time, deliveries of foreign crude oil to Montreal and Halifax refineries continue to increase rapidly so that the percentage of domestic crude oil received at Canadian refineries has remained practically constant since 1954.

Exports of Canadian crude oil to the United States rose from 14,833,971 bbl. in 1955 to 42,908,085 bbl. in 1956. The increase was equivalent to 66 p.c. of the total increase in oil field production. Forty-five per cent of the exports went to the State of Washington, a total of 41 p.c. to Minnesota, Wisconsin and Michigan, and 14 p.c. to an export market that developed in California during 1956.

A market for Canadian crude oil has not been established in Montreal. Because of the long pipeline transportation distance from Western Canada fields to the Province of Quebec, market outlets have been more readily developed in Western Canada and in adjacent areas of the United States. The building up of crude oil export markets in the Pacific Coast States and in the mid-western States has reduced Canada's net import balance despite the large imports into Montreal, centre of one-third of the nation's petroleum refining capacity. The increased amount of crude oil sold in Canada and the United States in 1956 raised the degree of petroleum self-sufficiency to 65 p.c. This makes allowance for crude oil imports of 106,470,015 bbl., petroleum product imports of 37,633,519 bbl. and petroleum product exports of 2,729,842 bbl.

Natural Gas Marketing.—During 1956, construction was started on the 2,294-mile Trans-Canada natural gas pipeline system to Eastern Canada and the 650-mile Westcoast Transmission system to the Pacific Coast. The construction stage for each project came after a number of years of planning and preparatory work. As construction proceeded, preparations for the marketing of natural gas were well under way in most centres between Vancouver and Montreal. Marketing utilities were being established and distribution facilities installed. With the commencement by late 1957 of natural gas deliveries in many new marketing areas across Canada, a change in the pattern of fuels usage will begin to take place and 1956 natural gas sales of 143.7 billion cu. feet will be greatly surpassed. Much benefit to the people of Canada will result from the availability of large supplies of natural gas to be used as a fuel and as a raw material for chemical manufacture.

Subsection 4.—Coal

The stabilizing trend that appeared in the coal industry in 1955 has continued despite increasing competition for markets from petroleum and natural gas. There is now some evidence that the demand for coal may shortly begin to rise again—that the increasing impetus of the Canadian economy generally and, in particular, the growing use of coal in the production of thermal-electric power to satisfy the clamour for more energy by the expanding pulp and paper and mining industries will beneficially influence the market for this commodity.

At the same time, the market for coal is decreasing in certain fields; the railways are replacing coal-burning locomotives by diesels and oil burners and certain coke and gas-making plants have been found no longer necessary because of the introduction of natural gas. The necessity to operate only those mines that remain economic under the stress of rising costs has resulted in the closing down of the Albion mine in the Stellarton area of Nova Scotia, the Greenhill mine of West Canadian Collieries Limited in the Crowsnest area of Alberta and the Luscar mine in the Mountain Park area of Alberta.

The industry recorded its fifth consecutive decrease in production in 1955, but the decline was only 94,699 tons from the 1954 production of 14,913,579 tons. In 1956 the downward trend was reversed and production increased again to 14,915,033 tons valued at \$95,466,866, though this was still 22.1 p.c. below the record in 1950. Of the 1956 production, 69.1 p.c. was bituminous coal, 15.2 p.c. subbituminous and 15.7 p.c. lignite.

Nova Scotia contributed about 39 p.c., Alberta 29 p.c., Saskatchewan almost 16 p.c., British Columbia and Yukon 10 p.c. and New Brunswick just under 7 p.c. Only Alberta among the provinces registered a decrease as compared with 1955.

The trend towards higher consumption of coal in evidence in 1955 continued throughout 1956. The 36,313,144 tons consumed in 1956 compared with 33,382,173 tons in 1955 and 32,788,268 tons in 1954. Whereas in 1954 almost 56 p.c. of the coal consumed was imported, in 1956 the percentage was over 61, made up basically of bituminous coal used in Central Canada. Coal sales made by retail fuel dealers decreased 3.4 p.c. from 1954 to 1955, and railway coal by 14.1 p.c., but coal used for industrial purposes increased by 2.8 p.c. From 1955 to 1956 retail coal sales again decreased substantially by 13.2 p.c., but railway coal increased 15.9 p.c. and industrial consumption 6.1 p.c. Thus it is becoming clear that, though sales of coal for household and commercial purposes are yielding very rapidly to competitive liquid and gaseous fuels, industrial coal consumption is beginning to show a healthy upswing. The increase in railway consumption in 1956 is accounted for by the fact that the increase in traffic has surpassed the rate of dieselization and thus has resulted in increased use of coal-burning locomotives.

The consumption of briquettes decreased from 962,000 tons in 1954 to 776,761 tons in 1955 but increased again to 879,208 tons in 1956 despite the discontinued operations of one of the producers in Western Canada. About 70 p.c. of the amount marketed (that is, about 82 p.c. of the Canadian output) was used by the railways in the western provinces mainly as locomotive fuel.

The coal industry is continuing its endeavour to not only maintain but to improve its market position by reducing costs of production and by producing not only better coal but the types and grades of coal most suited to the various consumer demands. Mechanization of underground operations has progressed especially in eastern collieries where most of the coal is now mined by mechanical miners of various types. The Dosco Miner developed by the Dominion Steel and Coal Corporation of Nova Scotia is extensively used in all their mines on longwall faces, but other machines of the ripper type suitable for room and pillar mining are also employed. Continuous mechanical mining has not yet been introduced in Western Canada, but there are several technical and engineering reasons for this, associated either with steepness of coal seam associated with friability, or with the toughness of the coal and the desire to retain a maximum of larger sizes.

The extensive use of strip mining also reduces coal costs. Strip mining is practised in all provinces except Nova Scotia, and over 36 p.c. of Canada's output is produced by this method. Practically the whole output in Saskatchewan is strip mined, over 80 p.c. in New Brunswick, about 47 p.c. in Alberta and 25 p.c. in British Columbia. On an average the output per man-day in strip mining increased from 12.5 tons in 1954 to 13.3 tons in 1956, compared with an increase of from 2.6 tons to 2.8 tons for underground. Over the period, output per man-day increased 10 p.c.

In an effort to produce better quality coals the industry continues to direct attention to the use of modern methods of beneficiation such as cleaning, drying, dust-proofing, freeze-proofing and the briquetting of fines. Additional facilities for cleaning and drying of fines have recently been installed at various collieries in both Eastern and Western Canada.

The Federal Department of Mines and Technical Surveys assists the industry by carrying out a group of research projects concerned with the beneficiation and utilization of Canadian coal. Special attention is being given to the cleaning of fines from western Canadian bituminous coals that are particularly friable, and to studying the coking properties of the coals in relation to the possible development of metallurgical industries, especially in Western Canada. The use of coal as a reductant and in the chemical industry is also being studied. In addition the Department is continuing the study of the phenomena of bump and outburst occurring in certain coal mines with the long-range objective of evaluating the causes of these phenomena so that mining at depth may be safe and economical. Detailed stratigraphic and palaeontological studies have been conducted in or near the coalfields of Nova Scotia and New Brunswick to assist in the precise correlation of

coal-bearing strata and their contained coal seams. Petrographic studies of various Canadian coals are also being conducted to aid in a better understanding of the coals in relation to utilization. The Department, through the Geological Survey, maintains a laboratory at Sydney, N.S., in co-operation with the Nova Scotia Department of Mines and the Nova Scotia Research Foundation, and, through the Division of Fuels of the Mines Branch, a laboratory in Edmonton, Alta., in co-operation with the Research Council of Alberta. Both offices assist in the development of the coal industry.

Details on coal in the respective coal-producing provinces follow.

Nova Scotia and New Brunswick.—Nova Scotia produces high-volatile and medium-volatile bituminous coking coals in the Sydney, Cumberland and Pictou areas and some non-coking bituminous coal in the Inverness area. Production in 1955 and 1956 was somewhat lower than in 1954, amounting to 5,787,915 tons valued at \$8.817 per ton in 1956.

Many of the operations have been mechanized to reduce production costs. The Dominion Coal Company Limited plans to establish a large central cleaning plant in the Sydney area, and the Four Star Collieries Limited will also operate a cleaning plant in the Broughton area. When these plants are completed more than 80 p.c. of Nova Scotia's coal production will be benefited by modern methods of cleaning. At the Princess colliery at Sydney Mines, Old Sydney Collieries Limited completed construction of an inclined tunnel from the shaft bottom to the surface to facilitate and reduce costs of transportation of coal from the mine to the cleaning plant. The tunnel is equipped with a 42-inch-wide, 3,800-ft.-long belt conveyor with a capacity of 750 tons per hour.

New Brunswick coal output comes mainly from a single thin seam of high-volatile bituminous coal in the Minto area. Production increased from 781,271 tons in 1954 to 983,482 tons in 1956. In 1955 the first mechanical coal-cleaning plant for cleaning 2 x 0 inch slack was established in this area. As a result of its success, from a technical and marketing viewpoint, a second plant to clean 6 x $\frac{1}{4}$ inch slack was started by another operator in 1956. These two plants will allow for the cleaning of over 34 p.c. of the output of New Brunswick. Both plants are equipped with modern mechanical and thermal drying machines.

Much of the output of the two provinces is used locally for industrial and domestic purposes. The quantity used for thermal power has increased very substantially. About 36 p.c. of the 1956 output was shipped to Central Canada for commercial, industrial and railway use.

Saskatchewan.—This Province produces only lignite coal from the Bienfait and Roche Perce fields in the Souris area. Production continued to increase and in 1956 amounted to 2,302,948 tons as against 2,116,740 tons in 1954. The coal was valued at \$1.829 per ton at the mine. Approximately 52 p.c. of the production was shipped to Manitoba and about 11 p.c. to Ontario for industrial, commercial and household use. With the extensive developments in progress for the production of thermal power in Saskatchewan and Manitoba, it is expected that lignite production will increase very sharply during the next two years.

The output of briquettes, which are made from carbonized lignite and used entirely for household and commercial purposes, was reduced to 39,000 tons in 1956, a decline of 2,000 tons from 1954.

Alberta.—Alberta produces almost all types of coal including a relatively small but growing tonnage of semi-anthracite from the Cascade area. Coking bituminous coal ranging from high to medium volatile was produced in the Crowsnest and Mountain Park areas, although towards the end of 1956 the last operator in the Mountain Park area closed down. Lower rank bituminous non-coking coals are produced in the Lethbridge and Coalspur areas and in several other areas of the foothills. The coal in the Drumheller, Edmonton, Brooks, Camrose, Castor and Carbon areas is subbituminous and that in the Tofield, Redcliff and several other areas is on the border of subbituminous and lignite. All these lower rank coals were used mainly for household and commercial purposes but industrial use is increasing, especially in thermal power production.

Production declined from 4,859,049 tons in 1954 to 4,361,274 tons in 1956. Since the discovery of the Leduc oil field in 1947, coal output in Alberta has declined by 46 p.c. from a production of 8,070,430 tons. About 52 p.c. of the 1956 output was subbituminous coal. The average value of bituminous coal was \$6.069 per ton and of subbituminous coal \$4.745. As already mentioned, the one remaining mine in the Mountain Park area suspended operations in 1956 as did a former large producer of railway coal in the Coal-spur area.

The output of briquettes, which are made from the semi-anthracite coals of the Cascade area and the medium-volatile bituminous coals of the Crowsnest area, amounted to 525,202 tons in 1956 compared with 637,000 tons in 1954. About 17 p.c. was prepared from semi-anthracite coal.

British Columbia.—Bituminous coking coal, ranging from high to low volatile, is mined on Vancouver Island and in the East Kootenay (Crowsnest), Telkwa and Nicola areas. Small quantities of subbituminous coal are produced in the Princeton field. Production in 1956 amounted to 1,469,791 tons as compared with the 1954 total of 1,299,510 tons. The average value of bituminous coal was \$5.973 per ton and subbituminous coal \$5.894 per ton.

Medium-temperature oven (by-product) coke for industrial consumption is manufactured chiefly in the Crowsnest area. The only briquetting plant in the Province produced over 188,000 tons of railway briquettes in 1956 as against 150,000 tons in 1954. A substantial quantity of coking coal from the Crowsnest area was exported to the United States for blending with Utah coals to upgrade the metallurgical coke.

Section 2.—Government Aid to the Mineral Industry*

Subsection 1.—Federal Government Aid

The Department of Mines and Technical Surveys.—The Federal Department of Mines and Technical Surveys came into being on Jan. 20, 1950, in the reorganization of the former Department of Mines and Resources. The Department has five branches—Surveys and Mapping Branch, Geological Survey of Canada, Mines Branch, Dominion Observatories, and Geographical Branch. The Department's functions include the administration of the Emergency Gold Mining Assistance Act and of the Explosives Act.

Surveys and Mapping Branch.—The Branch provides the base maps required for use in the development of Canada's natural resources, produces and distributes all Canadian aids to navigation, is responsible for legal surveys of federal lands and provides a national system of levelling and precision surveys for use as geodetic control by federal, provincial and private agencies.

The Geodetic Survey provides the original surveys that form the framework or basic control for mapping throughout Canada and for engineering and surveying projects related to natural resources development. Survey stations are established at fairly regular intervals across Canada and are marked by permanent monuments whose latitudes, longitudes and elevations above mean sea level are determined with a high degree of accuracy. The determination of geographical position by astronomical observations for mapping purposes in northern areas is being superseded by shoran trilateration in which the adaptation of radar is meeting with success.

The Topographical Survey provides topographical maps that show all significant natural and artificial features fundamental to the study and economic development of mineral and other natural resources. The Field Survey Section is responsible for the field surveys that provide ground control for mapping from aerial photographs, and the Air Survey Section plots and produces maps from these aerial photographs. The National

* Revised, under the direction of the Deputy Minister, in the Editorial and Information Division, Department of Mines and Technical Surveys, Ottawa.

Air Photographic Library indexes, preserves and distributes prints of all aerial photography done by or for the Federal Government. The Topographical Survey also administers the Canadian Board on Geographical Names.

The Legal Surveys and Aeronautical Charts Division makes and records legal surveys of federal Crown lands in the Yukon and Northwest Territories, the National Parks and Indian lands and reserves. This Division prepares aeronautical charts and electoral maps and prepares and distributes flight manuals.

The Canadian Hydrographic Service is responsible for the charting of the coastal and inland navigable waters of Canada, the analyses of tides and tidal current phenomena and the investigation of water-surface elevations of the St. Lawrence-Great Lakes waterway. The resultant data are published in the form of official navigation charts, volumes of Sailing Directions, Tide Tables and Water Level Bulletins.

The Map Compilation and Reproduction Division prepares, drafts and reproduces maps, charts and plans for lithographic printing in multicolour. The work includes the preparation and photo-reproduction of air chart bases, the reproduction and printing of air information for aeronautical charts, the preparation and printing of topographic maps and the reproduction and printing of hydrographic charts.

The Branch had 14 geodetic, 27 topographic, 15 legal survey and 20 hydrographic parties in the field in 1957.

Geological Survey of Canada.—The primary function of the Geological Survey is to obtain information on the geology of Canada that will be of assistance in the search for and development of mineral deposits. The results of its activities also provide a basis for the appraisal and conservation of Canada's mineral resources generally including water supplies, for soil surveys and for the solution of geological problems that frequently arise in construction projects. Reports issued by the Geological Survey include: memoirs with fairly complete descriptive accounts of the geology of particular areas, usually accompanied by geological maps; bulletins dealing with problems rather than areas; papers issued as soon as possible after the close of the field season, treating separately of each area and summarizing the information acquired; and the Economic Geology Series reports, dealing in a comprehensive way with mineral deposits of a particular type. Coloured geological maps are issued on various scales from one inch equalling a few hundred feet to one inch equalling eight or more miles, the common standard scales being one inch to one mile and one inch to four miles. Preliminary maps showing the geology are issued shortly after the field season ends for those areas where the search for metals or minerals is active.

In 1957 the Geological Survey had 72 parties in the field, one more than in 1956. The program featured two large helicopter projects, Operation Mackenzie and Operation Fort George. In Operation Mackenzie, nine officers of the Geological Survey and nine student assistants used helicopters to map 100,000 sq. miles of promising oil and gas territory in the Upper Mackenzie River basin in Northwest Territories lying between latitudes 60° and 64° and extending from longitude 126° to the western edge of the Canadian Shield. In Operation Fort George, three officers and three assistants mapped some 35,000 sq. miles of a 300-mile by 400-mile block of Quebec lying between latitudes 52° and 56° and extending from the Hudson and James Bay coast inland to longitude 68°. This is part of the largest unmapped area in the Canadian Shield. Operation Fort George will be continued in 1958.

The Precambrian Division is responsible for mapping and studying the rocks of the Canadian Shield and of the Arctic Islands. These studies help to establish the geological history and structure of the regions and the information is used as a guide in the search for mineral deposits.

The Post Precambrian Division is responsible for mapping and studying the rocks of the Appalachian and Cordilleran regions and the unconsolidated materials throughout Canada. The application of geology to engineering problems and the study of Canada's groundwater resources are also the responsibility of this Division.

The Fuels and Stratigraphic Geology Division includes stratigraphic palæontology, the geology of fuels (oil, natural gas and coal), subsurface geology and research on coal. Its function is to establish the character, age, thickness and correlation of both exposed and concealed sedimentary formations and to map the distribution and structure of these formations with the object of determining the economic possibilities of prospective oil, gas and coal bearing areas of Canada.

The Mineralogy Division makes mineralogical, geochemical, petrological, and isotopic studies of Canadian mineral deposits and associated rocks. Laboratories provide mineral identifications for the public, supply officers of the Survey with mineralogical, geochemical and geochronological data, and permit research on the genesis of ores, fuels and rocks. Systematic mineral collections are maintained and mineral and rock collections are prepared for use by prospectors and educational institutions.

The Mineral Deposits Division conducts special field studies on the geology of mineral deposits with particular regard to economic possibilities, origin, distribution and the establishment of clues for prospecting for similar deposits. Reports and other information on the geology of Canadian mineral deposits are compiled and special reports on deposits and prospecting published. The Division acts as official agent of the Atomic Energy Control Board in conducting research on uranium deposits and in receiving and compiling reports from companies operating under exploration and mining permits from the Board, and maintains a laboratory for making radiometric assays and identifications of radioactive minerals.

The Geophysics Division gathers, compiles and interprets geophysical data relating to the geology of Canada. Fundamental research is carried out in some phases of geophysical work.

Mines Branch.—The Branch is concerned in the main with the technological problems of the mineral industry and maintains well equipped ore-testing, mineral-dressing, fuel research, ceramic, radioactivity, industrial minerals and physical metallurgical laboratories.

The Mineral Dressing and Process Metallurgy Division serves Canada's mineral industry through tests, investigations and research on all types of Canadian ores. The main purposes of these activities are to devise economic and efficient methods of processing ores—a service of special benefit to new mining ventures and particularly to those developing low grade or complex deposits—and to assist mine operators in solving problems encountered in mill practice.

The work of the Radioactivity Division is centred on investigations relating to treatment of radioactive and less common ores. Activities include research on ore treatment and chemical process methods, provision of chemical and radiometric assay services, development of analytical methods, mineralogical investigations, also work on application of radiometric methods and tracer techniques in the mining and metallurgical industries. Much of the work done is of direct assistance to industry.

The work of the Industrial Minerals Division consists of tests, research and investigative work on industrial minerals, including water used for industrial purposes. The Division makes field studies of deposits, examines industrial processes utilizing them and conducts research into methods of beneficiating minerals from deposits of marginal and submarginal quality to bring them to the standards demanded by modern industry.

The Fuels Division studies the properties of fossil fuels in Canada to determine the most efficient means of utilizing fuel resources. Most of the work on coal is directed to investigations on the immediate problems of the industry and to engineering studies on the most efficient use of coal in combustion applications with particular reference to thermally generated electric power. Such investigations include work on the evaluation of cleaning performance and the beneficiation of coal fines which are difficult to market, the uses of coal in the metallurgical industries and the study of stress phenomena in mining. Research in petroleum is directed mainly to problems in the refining of heavy crudes and bitumens, and to the chemical evaluation of oils and bituminous substances for classification and genetic purposes.

The Physical Metallurgy Division aids the metal industries through the development of new alloys, new manufacturing techniques and new applications and in activities aimed toward improving present practices in metal fabrication. It serves the Department of National Defence by extensive research and investigative work concerned broadly with the development of defence materials and prototype equipment and with the metallurgical problems of that Department. The Division is also operative in the nuclear metallurgy field.

Dominion Observatories.—The two main units of the Dominion Observatories are the Dominion Observatory at Ottawa, Ont., and the Dominion Astrophysical Observatory at Victoria, B.C. Permanent magnetic observatories are maintained at Agincourt, Ont., Meanook, Alta., and at Resolute Bay and Baker Lake, N.W.T. Seismic stations for recording earthquakes are operated at Victoria, Horseshoe Bay and Alberni, B.C.; Banff, Alta.; Saskatoon, Sask.; Ottawa, Ont.; Seven Falls and Shawinigan Falls, Que.; Halifax, N.S.; and Resolute, N.W.T.

The Dominion Observatory, Ottawa, Ont., is responsible for the time service of Canada which involves nightly astronomical observations of star positions and radio broadcast services for distributing accurate time to all parts of Canada. Other astronomical activities centred at Ottawa include upper atmospheric studies by means of meteor observations, studies of the sun and its effect on earthly conditions and mathematical studies of the atmospheres of the sun and stars. The geophysical work, also administered from Ottawa, includes the magnetic survey of Canada with emphasis on aids to air and sea navigation, as well as field and observatory work of interest to the geophysical prospector. The methods of seismology are employed to study important aspects of the earth's crust in Canada and to assist in world-wide investigations of the earth's interior. Gravity observations are carried on throughout Canada with a generally similar purpose, special attention being paid to methods of locating mineral deposits.

The Dominion Astrophysical Observatory, Victoria, B.C., is devoted to fundamental research into the physical characteristics of the sun, stars, planets and the material of interstellar space. Its 73-inch reflecting telescope is one of the largest in the world and through its use many important contributions have been made to astronomical knowledge.

The Geographical Branch.—The function of the Branch is to organize and make available all the geographical data on Canada that might be of use in promoting the economic, commercial and social welfare of Canada. The work is of two kinds—the compilation of geographical material of national significance, and geographical surveys in the field.

Mineral Resources Division.—Formerly a unit of the Mines Branch, this Division is now a unit of the Department's Administration Branch. It provides a mineral information service that is freely used by government departments, mining and allied industries, and others interested in mining or its significance in the Canadian economy. A mineral resources index inventory is maintained of all known occurrences and of mines, both active and potential. The Division makes economic studies of different phases of the mining industry. It gives technical advice as required for the administration of the Emergency Gold Mining Assistance Act, prepares reports on request to aid in the administration of such matters as tax exemptions on new mining properties, and prepares reports and briefs on general legislation, taxation and tariff matters connected with the mineral industry.

The Dominion Coal Board.*—The Board was established by the Dominion Coal Board Act (R.S.C. 1952, c. 86) which was proclaimed on Oct. 21, 1947. By this Act the Board was constituted a department of government to advise on all matters relating to the production, importation, distribution and use of coal in Canada. The Board is also charged with the responsibility of advising upon and administering transportation subventions.

* Prepared under the direction of W. E. Uren, O.B.E., Chairman of the Dominion Coal Board.

Ancillary to these principal duties the Board is empowered to undertake research and investigations with respect to:—

- (1) the systems and methods of mining coal;
- (2) the problems and techniques of marketing and distributing coal;
- (3) the physical and chemical characteristics of coal produced in Canada with a view to developing new uses therefor;
- (4) the position of coal in relation to other forms of fuel or energy available for use in Canada;
- (5) the cost of production and distribution of coal and the accounting methods adopted or used by persons dealing in coal;
- (6) the co-ordination of the activities of Government Departments relating to coal;
- (7) such other matters as the Minister may request or as the Board may deem necessary for carrying out any of the provisions or purposes of the Act.

In addition the Dominion Coal Board Act provides authority in the event of a national fuel emergency to ensure that adequate supplies of fuel are made available to meet Canadian requirements.

Assistance by transportation subventions, which have been maintained in varying degrees during the past 28 years, was designed to further the movement of Canadian coals by equalizing as far as possible the laid down costs of Canadian coals with imported coals. As these costs and the conditions of the coal industry are subject to variation, the Board has to review from time to time the rates of subvention and the areas where the assistance is required. The subventions in respect of the various Canadian coals are authorized by Orders in Council and are paid from moneys voted by Parliament for the purpose from year to year. During the year ended Mar. 31, 1957, a total of 3,321,614 tons were shipped under subvention and \$9,115,082 was paid in assistance.

As agent to the Minister of Mines and Technical Surveys, the Board has continued to handle application for loans under the Maritime Coal Production Assistance Act (R.S.C. 1952, c. 179) and administer the loans granted thereunder. The Board has also continued to administer payment under the Canadian Coal Equality Act (R.S.C. 1952, c. 34) which provides a subsidy on Canadian coal used in the manufacture of coke for metallurgical purposes. In the fiscal year 1956-57, 685,973 tons were bonused at a cost of \$339,556.

The Dominion Coal Board has maintained a continuous review of Canada's energy requirements. In view of the growing impact of oil and natural gas on the markets for Canadian coal,* the Board and its staff have intensified the study of the relation of the competing sources of energy and of possible new outlets for the solid fuel, especially in the field of thermal power.

The Board, since its inception, has worked toward the co-ordination of the activities of various government departments and other bodies relating to coal. On the matter of technical research as related to marketing and distributing coal, the Board has maintained close liaison with the Division of Fuels of the Department of Mines and Technical Surveys. Dominion-provincial conferences on coal research have been held annually since 1949 for the purpose of co-ordination and exchange of ideas.

Government purchases of fuel which constitute an important growing outlet for coal has claimed a greater amount of the Board's time. The Interdepartmental Committee on Fuel, set up in the past to co-ordinate and advise on the purchase and supply of fuel to Armed Services, has remained active. Furthermore, the Dominion Fuel Committee, which was organized in 1956 along similar lines as an advisory body to other government departments, has already demonstrated the value of the establishment of this group.

In a wider sphere the Chairman of the Board has met annually with the Coal Policy Committee of the Provincial Ministers of Mines and the Board has given consideration to recommendations made by the latter body relating to coal. The Board has also kept contact with trade and other associations concerned with the various phases of the Canadian coal industry in order to foster better mutual understanding of governmental and private endeavour. It has generally constituted a central agency through which representations may be made to the Government.

* See pp. 510-515.

The Board has available a comprehensive fund of information on all matters respecting coal dating back to the inception of its predecessor, the Dominion Fuel Board, in 1922. Many other departments of government continue to take advantage of this situation by consultations on various matters having to do with the supply and marketing of coal. The Board maintains the closest co-operation with the Division of Fuels of the Department of Mines and Technical Surveys on fuel problems.

Pursuant to the recommendations of the Royal Commission on Coal (1946), the Board has continued to work for a reduction of customs duties and sales tax on coal mining machinery. It has also maintained its efforts to create a uniform system of coal mine cost accounting which would provide an accurate presentation of the cost of production.

The Dominion Coal Board consists of seven members including the Chairman who is its Chief Executive Officer and has the status of a deputy minister. The Board is responsible to, and subject to the direction of, the Minister of Mines and Technical Surveys.

Subsection 2.—Provincial Government Aid*

Newfoundland.—The Newfoundland Government, through its Mines Branch, provides several valuable services to those interested in prospecting and mining. It will supply certain geological maps of specific areas to interested parties. It will identify specimens sent in from Newfoundland and Labrador and will assay by chemical means those that appear to have some mineral content. If good specimens from a known area warrant further help, a geologist from the Department of Mines and Resources will visit the locality and give advice. Prospecting and mining permits are issued by the Department and claims are registered.

Nova Scotia.—Under the provisions of the Mines Act (R.S.N.S. 1954, c. 179), the Government of Nova Scotia may assist a mining company or operator in the sinking of shafts, slopes, deeps and winzes and the driving of adits, tunnels, crosscuts, raises and levels. This assistance may take the form of work performed under contract, the payment of bills for materials and labour or the guarantee of bank loans. Any such work must be approved by the Department of Mines. The Government is also authorized to assist the mining industry to procure power on the most economical basis and may guarantee the Nova Scotia Power Commission against any loss incurred on account of capital investments made for that purpose or revenue. Mining machinery and equipment that may be used in searching for or testing and mining minerals may be made available through the Government. Such equipment is under the direct supervision of the Chief Mining Engineer.

The Government of Nova Scotia is also empowered to make any regulations considered necessary for increasing the output of coal. Such regulations cover the appropriation on payment, of unworked coal lands, operation of coal mines, loans or guarantees for loans. Close co-operation is maintained with the Federal Government in carrying out federal regulations made to secure increased production and economical distribution of coal from the mines of the Province.

New Brunswick.—There are five divisions under the Mines Branch of the Department of Lands and Mines. The *Mineral Lands Division* administers the disposition of Crown mineral rights including the issuing of prospecting licences, recording of mining claims, issuing of mining licences and leases and other matters pertaining thereto. Detailed and index claim maps are prepared for distribution. The *Mine Inspection and Engineering Division* administers the safety regulations governing operations under the Mining Act. Regular inspections of all mines are performed. Laboratory facilities are maintained. It is the responsibility of this Division to approve equipment used in mines. The *Geological Division* carries on general and detailed geological mapping and investigation. Maps and reports are prepared for distribution. Mineral and rock specimens are examined for prospectors. Preliminary examinations of mineral prospects are performed where requested and circumstances warrant. The *Mine Assessment Division* is responsible for collection of mining tax and royalties and preparation of statistics concerning mineral production.

* Compiled from material supplied by the respective provincial governments.

The *Bathurst Office Division* serves as recording office for northeastern New Brunswick. In addition, claim maps as well as topographical, geological and aeromagnetic maps are available for inspection and distribution. The staff is prepared to provide information concerning the Mining Act and the use of various types of maps.

Quebec.—The Mining Act (R.S.Q. 1941, c. 196) authorizes the Quebec Department of Mines to build, maintain and improve roads needed for mining development. Such work is done by contract under the supervision of departmental engineers. The Act gives the Department considerable latitude in this respect. Certain major roads have been built to new mining districts and completely paid for; on the other hand if a particular property requires a branch road from an established highway the owner may be required to contribute a portion of the cost. To prevent the development of uncontrolled settlements in the vicinity of operating mines the Department regulates the use of land and permits the establishment of well organized communities. The municipal organization of such communities is administered by the Department of Municipal Affairs.

The Department maintains well equipped laboratories for the benefit of prospectors, geologists, engineers and mine operators. The facilities include equipment for mineralogy, petrography, ore dressing, and analysis by wet or dry assays, spectrography or X-ray. Qualitative and mineralogical determinations are made free but quantitative analyses are made for a fee according to a tariff schedule. The Mining Act provides free coupons to be used by prospectors in paying for such analyses.

The Province has authorized the establishment of research laboratories to assist mining and metallurgical enterprises in the processes and techniques of extracting, transforming and utilizing ores.

The Department undertakes geological mapping and inspection. The work is divided between two branches, one responsible for reconnaissance (areal) mapping, the other doing detailed mapping in mining districts and inspection of individual deposits or properties. Field parties are headed by geologists or mining engineers. The published reports on these investigations are distributed free upon request. During the field season about 35 parties are maintained in different sections of the Province. Offices, in charge of resident geologists, are maintained in mining districts, to collect, preserve and compile geological information disclosed by mining explorations and individual sheets of the compilation are made available to the public.

The Department employs inspectors whose duties are almost exclusively concerned with the safety of workmen in operating mines. Three Mobile Mine Rescue Stations are also operated and a mine rescue training program conducted throughout the Province.

In the field of education for prospectors, five-week courses are organized each year at Laval and Montreal Universities. University scholarships are granted each year to deserving undergraduates and postgraduate students in mining, geology and metallurgy, thus contributing to the training of qualified engineers for the benefit of the mining industry. Lectures are given to prospectors at different localities throughout the Province.

Ontario.—The Ontario Department of Mines renders a multiplicity of services of direct assistance to the mining industry within the Province, as briefly enumerated below.

Mining Lands Branch.—This Branch handles all matters dealing with the recording of mining claims, assessment work, etc., and the final issuance of title to mining lands. As a service to the mining public, individual township maps are prepared and kept up to date showing lands open for staking and recorded and patented claims therein. As new surveys are made or later data become available maps are revised in keeping with such information. District Mining Recorders maintain offices at strategic locations throughout the Province.

Geological Branch.—A continuing program of geological mapping and investigation is carried out by the geological staff of the Department. Detailed reports and geological maps of the areas studied are made available to the public. In many of the active areas

of the Province resident geologists are engaged to gather and make available to the public, information concerning geological conditions, exploration and development within their respective districts. One geologist specializing in industrial minerals is maintained on the staff to examine deposits of this type, to investigate methods of treatment and recovery of such minerals and to compile data on the uses, specifications and markets for such products. Collection and dissemination of information on groundwater resources is also a function of the Geological Branch. During the winter months courses of instruction for prospectors are held in various centres throughout the Province.

Laboratories Branch.—The Provincial Assay Office located in the East Block of the Parliament Buildings, Toronto, carries out wet analyses and assays of metal and rock constituents on a custom fee basis and also renders the same service free of charge to holders of valid assay coupons issued for the performance of assessment work on mining claims. The Timiskaming Testing Laboratories situated at Cobalt, in addition to performing fire assays and chemical analyses, conducts a bulk sampling plant mainly to assist the producers of the area in the marketing of the cobalt-silver ores. A Cable Testing Laboratory, wherein all hoisting ropes in use at the mines are periodically tested, is operated under the supervision of the Inspection Branch.

Inspection Branch.—The main function of this Branch is the regular examination of all operating mines, quarries, sand and gravel pits and certain metallurgical works with a view to ensuring proper conditions of health and safety to the men employed. District offices to serve the local areas are maintained in the major mining centres of the Province. Mine rescue stations in the principal mining sections are operated under the supervision of the Inspection Branch.

Exhibitions.—The Department each year presents displays pertaining to mining within the Province at such exhibitions as the Central Canada at Ottawa, the Canadian National at Toronto and at other centres from time to time.

Publications Branch.—All maps and reports of the Department are distributed through the agency of the Publications Branch located at the main office of the Department.

Library.—A mining library for the use of the Department and the public is maintained within the Department. This library is comprised mainly of publications and maps of the Federal and Provincial Governments of Canada as well as of numerous periodicals and bulletins from the United States.

Mining and Access Roads.—In 1951 the Department of Mines undertook a program of road construction in the mineralized areas of the Province, to open them for prospecting and development, and to facilitate the actual operation of mining enterprises. When the importance of this program in its relation to the whole development of northern Ontario became apparent, the Government decided that its scope should be widened, and, with that end in view, an interdepartmental committee was set up early in 1955 to decide on matters of policy, and to determine the locations and priorities of the proposed roads. The Minister of Mines sits on this committee with the Ministers of Lands and Forests, of Public Works, and of Highways.

The Department of Highways supervises the construction of all access roads. Certain roads may be subsidized while others may be financed solely by Department of Mines funds. The sum of \$1,000,000 a year has been made available for this project. Thirty-nine roads, totalling about 420 miles, have been completed since 1951.

Manitoba.—The Mines Branch of the Manitoba Department of Mines and Natural Resources offers five main services of assistance to the mining industry: maintenance, by the Mining Recorder's office at Winnipeg and The Pas, of all records essential to the granting and retention of titles to every mineral location in Manitoba; compilation, by the geological staff of the Branch, of historical and current information pertinent to mineral occurrences of interest and expansion of this information by a continuing program of geological mapping; enforcement of mine safety regulations and, by collaboration with industry, introduction of new practices such as those concerned with mine ventilation and the training of mine rescue crews which contribute to the health and welfare of mine workers; and maintenance of a chemical and assay laboratory to assist the prospector and the professional man in the classification of rocks and minerals and the evaluation of mineral occurrences.

Manitoba also aids the mining industry by the construction of access roads to mining districts.

Saskatchewan.—The assistance given to the mining industry by the Saskatchewan Government consists of: the maintenance at Regina of a Geology Department, under a Chief Geologist (Precambrian); resident geologists stationed in or near the principal mining areas; geological survey parties and reports; prospectors' school and prospectors' assistance plan. The Chief Geologist and staff are available at all times to give information and other help to interested parties. A resident geologist is stationed at Uranium City so as to give all possible assistance to prospectors in that area. During the summer months geological survey parties study and map attractive areas and prepare reports which are made available to anyone interested. The prospectors' school gives basic training in geology, mineralogy and prospecting and exploration techniques to future prospectors. Prospecting has become a skilled and specialized trade and instruction in this field will help young men get a start in a profession very vital to the mining industry of Canada. The prospectors' assistance plan, which is intended to encourage prospecting, assists bona fide prospectors by way of equipment and transportation and provides technical advice regarding geologically favourable areas. Courses on identification of minerals and the use of the geiger counter are conducted at various centres in northern Saskatchewan which are largely settled by Indians and métis.

A long-term program of geophysical surveying is under way. In 1957 an airborne magnetometer and electromagnetic survey was made of an area of approximately 1,700 sq. miles. The resulting maps will be sold at a nominal price to the prospecting and mining fraternity to assist them in utilizing this approach to prospecting.

Alberta.—Alberta Government assistance to the mining industry is diversified in character. The Mines Division of the Department of Mines and Minerals regulates coal mines and quarries and maintains standards of safety by inspection and certification of workers. The Workmen's Compensation Board also maintains safety standards and trains mine rescue crews. The oil and gas industries are served in a similar way by the Petroleum and Natural Gas Conservation Board. Its regulatory measures, however, are also concerned with the prevention of waste of oil and gas resources and with giving each owner of oil and gas rights the opportunity of obtaining a fair share of production. This Board compiles periodic reports and annual records which are of invaluable assistance in oil development in Alberta. The mining industry is also served by the Research Council of Alberta which has made geological surveys of most of the Province and has carried forward projects concerned with the uses and development of minerals. The Council has

studied the occurrence, uses and analysis of Alberta coals and their particular chemical and physical properties, the use of coals in the generation of power, the upgrading and the cleaning of coal and has also studied briquetting, blending, abrasion loss, shatter and crushing strength, asphalt binders and dust-proofing of coal. Studies have been made of glass sands, salt, fertilizers, cement manufacture and brick and tile manufacture.

The Province from time to time has had Commissions examine various aspects of the mining industry when it was considered that their findings would be of assistance in developing such industries. The Province, together with the Canadian Association of Oil Well Drilling Contractors and the Western Canada Petroleum Association, maintains a detailed supervisory and safety training program concerned with the drilling of oil and gas wells. Of assistance also to mining companies and oil companies are the special deductions provided for in the Alberta Corporation Income Tax Act. These follow the parallel provisions in the Federal Income Tax Act.

British Columbia.—The Department of Mines of British Columbia provides the following services: detailed geological mapping as a supplement to the work of the Geological Survey of Canada; free assaying and analytical work for prospectors registered with the Department; assistance in the field to the prospector by departmental engineers and geologists; grubstakes, limited to a maximum of \$500, for prospectors; assistance in the construction of mining roads and trails; and inspection of mines to ensure safe operating conditions.

Section 3.—Mining Legislation

Federal Mining Laws and Regulations.—The Federal Government administers the mineral properties of the Yukon and Northwest Territories as well as those within Indian reserves and in National Parks.

Mining Acts and Regulations covering the Yukon and Northwest Territories are administered by the Mining and Lands Division, Northern Administration and Lands Branch, Department of Northern Affairs and National Resources. Mineral rights underlying grants issued for Federal lands are reserved to the Crown in the Yukon and Northwest Territories.

Mining rights in the Yukon and Northwest Territories may be acquired by staking claims under the appropriate Act or Regulations. Twenty-one-year leases of claims may be acquired. These leases are renewable.

The disposal of minerals occurring in Indian reserves is subject to the consent of the Indians occupying the reserve and to treaties relating thereto.

The Acts and Regulations governing mining and quarrying on federal lands are summarized in Report No. 854, entitled *Digest of the Mining Laws of Canada*, issued by the Mines Branch, Department of Mines and Technical Surveys, Ottawa. This publication also lists all the laws and regulations pertaining to mining on federal lands. Copies of these individual Acts and Regulations may be obtained by applying to the Northern Administration and Lands Branch mentioned above. Another publication of interest in connection with mining regulations and available from the Mineral Resources Division of the Department of Mines and Technical Surveys is entitled *Summary Review of Federal Taxation and Certain Other Federal Legislation Affecting Mining, Oil and Natural Gas Enterprises in Canada*.

Provincial Mining Laws and Regulations.*—All Crown mineral lands lying within the boundaries of the several provinces (with the exception of those within Indian reserves and National Parks which are under the jurisdiction of the Federal Government) are administered by the respective provincial governments.

The granting of land in any province except Ontario and Nova Scotia no longer carries with it mining rights upon or under such land. In Ontario mineral rights are expressly reserved if they are not to be included. In Nova Scotia all minerals belong to the Crown except limestone, gypsum and building materials and, in granting land from the Crown, the right to these minerals goes with the title. In Newfoundland mineral and quarry rights are expressly reserved. Some early grants in British Columbia, Alberta, Saskatchewan, Manitoba, New Brunswick, Quebec and Newfoundland also included certain mineral rights. Otherwise mining rights except in Newfoundland must be separately obtained by lease or grant from the provincial authority administering the mining laws and regulations. Mining activities may be classified as placer, general minerals (or veined minerals and bedded minerals), fuels (coal, petroleum, gas) and quarrying. Provincial mining regulations under these divisions are summarized as follows:—

Placer.—In those provinces in which placer deposits occur there are regulations defining the size of placer holdings, the terms under which they may be acquired and held and the royalties to be paid.

General Minerals.—These minerals are sometimes described as quartz, lode, or minerals in place. With the exception of British Columbia the most elaborate laws and regulations apply in this division. In all provinces except Alberta a prospector's or miner's licence, valid for one year, must be obtained to search for mineral deposits, the licence being general in some areas but limited in others. A claim of promising ground of a specified size may then be staked. This claim must be recorded within a time limit and payment of recording fees made except in Quebec where no fees are required. Work to a specified value per annum must be performed upon the claim for a period of up to ten years. There is no time limit in British Columbia but \$500 assessment work, of which a survey may represent one-fifth, must be performed and recorded before a lease may be obtained. In Quebec a specified number of man-days of work must be performed and the excess may be carried forward for renewals of licence. Before mining can be commenced a mining concession must be purchased for which it is necessary to produce an engineer's report indicating the presence of an orebody. The taxation applied most frequently is a percentage of net profits of producing mines or royalties. In the Province of Newfoundland the provincial mining tax has been modified since Confederation on Mar. 31, 1949, to conform with the provincial obligations under the Dominion-Provincial Tax Agreement. No other form of taxation or royalty now exists.

Fuels.—In provinces where coal occurs the size of holdings is laid down, together with the conditions of work and rental under which they may be held. In Quebec, ordinary mining claims give rights to all mineral substances and to their development, and stakings for combustible natural gas, salt, coal, mineral oil or naphtha, or iron sands may cover 1,280 acres per claim. Royalties are sometimes provided for. Acts or regulations govern methods of production. In the search for petroleum and natural gas an exploration permit or reservation is usually required. However, in Alberta, Saskatchewan and British Columbia leases usually follow the exploration reservation whether or not any discovery of oil or gas is made because exploration costs are applicable in part on the first year's

* Compiled from material supplied by the provincial governments.

rental. In other provinces, except Manitoba, the discovery of oil or gas is usually prerequisite to obtaining a lease or grant of a limited area, subject to carrying out drilling obligations and paying a rental, a fee, or a royalty on production.

Quarrying.—Regulations under this heading define the size of holdings and the terms of lease or grant. On Quebec private lands the quarry belongs to the owner; on Crown lands mineral rights belong to the Crown and may be obtained in accordance with the provisions of the law although the rights to exploit peat or marl must be obtained by special licence.

Copies of mining legislation including regulations and other details may be obtained from the provincial authorities concerned.

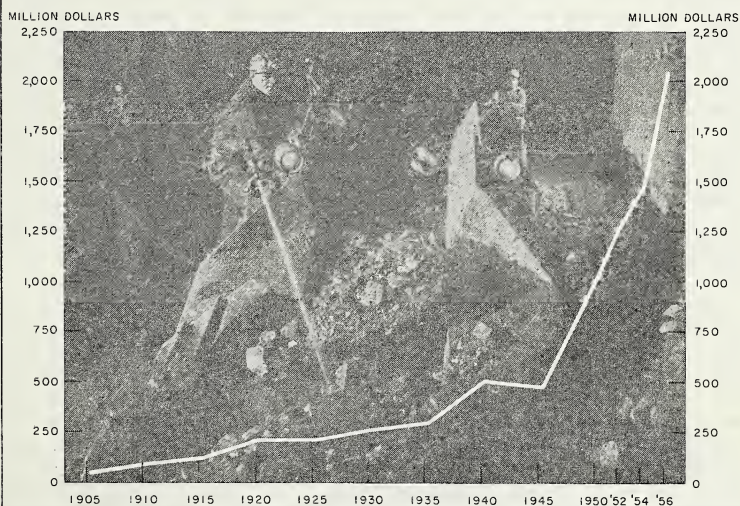
Section 4.—Statistics of Mineral Production

The importance of mineral production compared with other primary industries in Canada is indicated in Chapter XVII and its part in the foreign trade of Canada is dealt with in Chapter XXII.

Subsection 1.—Value and Volume of Mineral Production

Statistics of the annual value of mineral production are available from 1886, total production being shown for five-year intervals from that date to 1930 and annually for subsequent years in Table 1. These figures are not strictly comparable throughout the period because of minor changes in methods of computing metallic content of ores sold and valuations of products but they do serve to show broad trends in the mineral industry.

ANNUAL VALUE OF MINERAL PRODUCTION, CANADA 1905-56



The increase in the value of mineral production since the end of World War II has been phenomenal, having more than tripled since 1947. Production per head of the population advanced from \$51.38 in that year to \$128.58 in 1956. Although part of this increase is accounted for by advanced prices, the index of the volume of output from Canadian mines records an advance from 106.2 (1935-39=100) to 272.5 in the same comparison (*see* Table 4).

1.—Value of Mineral Production 1886-1956

Year	Total Value	Value per Capita	Year	Total Value	Value per Capita	Year	Total Value	Value per Capita
	\$	\$		\$	\$		\$	\$
1886.....	10,221,255	2.23	1933.....	221,495,253	20.83	1945.....	498,755,181	41.32
1890.....	16,763,353	3.51	1934.....	278,161,590	25.90	1946.....	502,816,251	40.91
1895.....	20,505,917	4.08	1935.....	312,344,457	28.80	1947.....	644,869,975	51.38
1900.....	64,420,877	12.15	1936.....	361,919,372	33.05	1948.....	820,248,865	63.97
1905.....	69,078,999	11.51	1937.....	457,350,002	41.41	1949.....	901,110,026	67.01
1910.....	106,823,623	15.29	1938.....	441,823,237	39.62	1950.....	1,045,450,073	76.24
1915.....	137,109,171	17.18	1939.....	474,602,059	42.12	1951.....	1,245,483,595	88.33
1920.....	227,859,665	26.63	1940.....	529,825,035	46.55	1952.....	1,285,342,353	89.07
1925.....	226,583,333	24.38	1941.....	560,241,290	48.69	1953.....	1,336,303,503	90.40
1930.....	279,873,578	27.42	1942.....	566,768,672	48.63	1954.....	1,488,382,091	96.59
1931 ¹	230,434,726	22.21	1943.....	530,053,966	44.94	1955.....	1,795,310,796	114.37
1932.....	191,228,225	18.19	1944.....	485,819,114	40.67	1956.....	2,067,699,096	128.58

¹ Beginning with 1931, exchange equalization on gold production is included.

² Value of Newfoundland production included from 1949.

Current Production.—Continuation of the remarkable expansion in the crude petroleum and iron ore industries, a substantial gain in copper production and smaller gains for most of the other minerals brought the 1956 value of mineral production in Canada above the two billion dollar mark for the first time. The total of \$2,067,700,000 was 15.2 p.c. higher than the 1955 value of output and almost double the figure for 1950. Crude petroleum was far in the lead in gross value of output at \$401,800,000, copper retained second place at \$291,500,000 and nickel was again in third place at \$223,300,000. Iron ore at \$156,300,000 displaced gold in fourth position, the latter dropping to fifth place at \$150,800,000. Next in the ten leading minerals was zinc at \$125,500,000, asbestos at \$109,700,000, coal at \$95,500,000, cement at \$77,900,000 and sand and gravel at \$72,600,000. The 1956 figures on uranium production do not reflect the full impact of the tremendous developments in uranium mining across the country. Four mills were in operation for the full year and two others came into production during the year. The value of \$39,600,000 represented shipments from the refinery at Port Hope, Ont.

The output for metals alone was \$1,134,400,000, up \$126,500,000 or 12.6 p.c. from the 1955 total. Only six of the 23 metals listed showed declines in quantity output compared with the previous year—antimony, gold, lead, magnesium, platinum, paladium and bismuth. Copper output reached a record of 353,000 tons, 8.4 p.c. more than in 1955 and 7.8 p.c. greater than the former high of 328,000 established in 1940. Nickel production was also the greatest on record at 178,000 tons, 1.8 p.c. above the 1955 output. The world supply of nickel, of which Canada's share amounts to about 65 p.c., has been unable to keep up with demands, and wide-spread exploration and development programs have been carried out by leading Canadian producers, an interest intensified by recent price advances. Shipments of iron ore increased 6,200,000 tons to an all-time high of 22,500,000, an advance which has probably raised Canada to fourth place among the iron ore

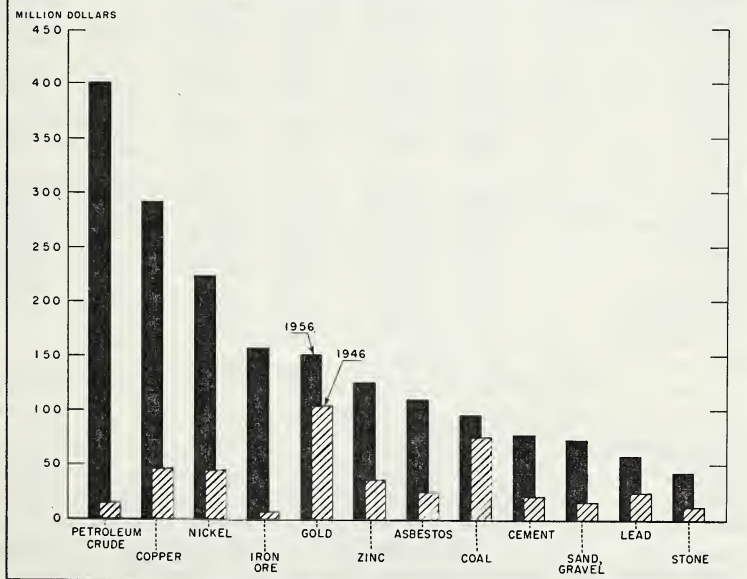
producing countries of the world. World demand for the principal non-ferrous base metals generally continued strong throughout the year and, with the exception of copper, prices held fairly steady.

The value of non-metallics increased 18.2 p.c. in 1956 to \$171,200,000. Of this total, \$109,700,000 was accounted for by asbestos. While the tonnage of that product was about 2.3 p.c. lower than in 1955, higher prices for certain grades resulted in an increase in value of 14.0 p.c. Most of the other non-metallics increased in value. Salt was up by 37.5 p.c., gypsum by 3.3 p.c. and recoveries of titanium dioxide slag by 30.4 p.c.

The value of mineral fuels was up 24.3 p.c. to \$514,800,000, with crude petroleum accounting for 78.1 p.c. of the total. Crude petroleum has been Canada's leading mineral product since 1953 and in 1956 accounted for almost one-fifth of the entire mineral production value of the country. A 69.7-p.c. increase in output in Saskatchewan, 42.0 p.c. in Manitoba and 27.7 p.c. in Alberta boosted Canada's production to a record total of 170,600,000 bbl. valued at \$401,800,000. The downward trend in coal production was checked in 1956 when tonnage increased slightly to 14,900,000 valued at \$95,500,000. Output of natural gas increased to a new high of 173,300,000 M cu. feet valued at \$17,500,000.

Demand for structural materials continued to expand and the value of output increased 8.3 p.c. in 1956 to \$247,300,000. Portland cement was up 18.6 p.c., clay products such as brick and tile 7.9 p.c. and sand and gravel about 7.2 p.c. The value of stone and lime was down slightly.

VALUE OF LEADING MINERALS PRODUCED IN CANADA,
1946 AND 1956



2.—Quantity and Value of Minerals Produced 1954-56

Mineral	1954		1955		1956 ^P	
	Quantity	Value	Quantity	Value	Quantity	Value
		\$		\$		\$
Metallics.....	...	799,916,396	...	1,007,939,501	...	1,134,354,370
Antimony..... lb.	1,302,333	349,249	2,021,726	563,345	1,820,000	576,300
Bismuth..... "	258,675	572,183	265,896	572,362	273,007	494,157
Cadmium..... "	1,086,780	1,847,526	1,919,081	3,262,439	2,258,184	3,838,913
Cerium..... "	—	—	...	988	—	—
Cobalt..... "	2,252,965	5,912,997	3,318,637	8,563,700	3,685,956	9,372,760
Columbium (Cb ₂ O ₅)... "	90	2,294	42	1,032	—	—
Copper..... "	605,464,042	175,712,693	651,987,423	239,756,455	706,585,547	291,469,615
Gold..... oz. t.	4,366,440	148,764,611	4,541,962	156,788,528	4,378,862	150,808,010
Indium..... "	477	1,278	104,774	232,598	358,000	805,500
Iron ore..... ton	7,361,598	49,666,507	16,283,177	110,435,850	22,526,311	156,327,885
Iron ingots..... "	90,562	2,910,663	115,955	4,831,845	157,000	6,339,000
Lead..... lb.	436,990,488	58,250,831	405,525,038	58,314,500	373,349,541	57,906,514
Magnesium and calcium	...	4,101,642	...	6,585,409	...	5,617,826
Manganese ore..... ton	—	—	—	—	...	1,900
Mercury..... lb.	—	—	75	250	—	—
Molybdenite..... "	752,417	457,912	1,389,177	823,954	1,452,028	967,461
Nickel..... "	322,557,961	180,173,392	349,856,997	215,866,007	355,986,460	223,343,992
Palladium, rhodium,						
iridium, etc..... oz. t.	189,350	7,956,087	214,252	8,321,633	161,600	6,495,065
Platinum..... "	154,356	12,550,469	170,494	14,747,732	150,000	15,585,000
Selenium..... lb.	323,529	1,617,645	427,109	3,203,319	508,000	6,858,000
Silver..... oz. t.	31,117,949	25,907,870	27,984,204	24,676,472	28,794,573	25,831,612
Tantalum (Ta ₂ O ₅)... "	77	2,696	390	9,760	—	—
Tellurium..... "	8,171	14,300	9,014	15,774	24,000	42,000
Thallium..... "	—	—	275	378	—	—
Tin..... "	333,788	263,359	492,781	408,030	611,000	521,550
Titanium ore..... ton	1,541	9,462	1,464	10,634	4,443	37,100
Tungsten concentrates.. lb.	2,170,633	5,795,781	1,942,770	5,508,437	2,206,662	6,060,992
Uranium minerals..... "	...	26,467,574	...	26,031,604	...	39,577,000
Zinc..... lb.	752,982,353	90,207,285	866,714,038	118,306,466	847,239,825	125,476,218
Non-metallics (excluding Fuels).....	...	130,523,624	...	144,920,841	...	171,241,069
Arsenious oxide..... lb.	1,180,350	48,333	1,571,787	69,159	2,624,757	86,617
Asbestos..... ton	924,116	86,409,212	1,063,802	96,191,317	1,038,975	109,665,924
Barite..... "	221,472	2,003,796	253,736	2,277,166	307,808	2,509,199
Diatomite..... "	4	192	16	352	—	—
Feldspar..... "	16,096	301,049	18,152	355,879	17,763	365,370
Fluorspar..... "	118,969	2,987,026	128,114	2,708,437	151,738	3,855,565
Graphite..... "	2,463	254,534	—	—	—	—
Grindstone..... "	—	—	10	1,500	—	—
Gypsum..... "	3,950,422	7,094,671	4,667,901	8,037,153	5,192,805	8,300,585
Iron oxide..... "	5,798	183,507	7,702	162,512	7,757	170,135
Lithia..... lb.	17,052	6,300	114,376	61,752	4,800,000	2,640,000
Magnesian dolomite,						
brucite..... "	...	4,394,280	...	2,151,820	...	2,412,000
Mica..... lb.	1,706,770	85,139	1,640,708	77,541	1,184,542	73,622
Mineral water..... imp. gal	284,078	148,057	306,683	160,510	303,500	157,000
Nepheline syenite..... ton	123,669	1,770,528	146,068	2,099,512	179,381	2,489,633
Peat moss..... "	99,272	3,018,622	117,579	3,485,287	125,074	3,708,191
Quartz..... "	1,716,151	1,574,893	1,869,913	2,039,575	2,114,415	2,781,236
Salt..... "	969,887	8,340,163	1,244,761	10,122,299	1,593,131	13,916,532
Silica brick..... M	3,578	465,157	4,763	602,625	5,576	705,077
Sopstone and talc..... ton	28,143	335,353	27,160	338,967	29,030	358,750
Sodium sulphate..... "	158,417	2,385,573	178,888	2,799,715	179,438	2,854,223
Sulphur..... "	532,406	4,875,969	628,443	5,984,953	763,736	7,440,410
Titanium dioxide..... "	88,408	3,841,270	117,042	5,192,810	152,500	6,771,000
Fuels.....	...	352,959,465	...	414,318,015	...	514,850,071
Coal..... ton	14,913,579	96,600,266	14,818,880	93,579,471	14,915,033	95,466,866
Natural gas..... M cu. ft.	120,735,214	12,482,109	150,772,312	15,098,508	173,260,500	17,542,555
Peat..... "	6	60	—	—	—	—
Petroleum, crude..... bbl.	96,080,345	243,877,030	129,440,247	305,640,036	170,569,200	401,840,650
Structural Materials.....	...	204,982,696	...	228,232,439	...	247,253,586
Clay products, brick,						
tile, etc..... "	...	32,360,098	...	35,259,770	...	38,062,112
Cement..... bbl.	22,437,477	59,035,644	25,168,464	65,650,025	29,719,377	77,876,046
Lime..... ton	1,214,839	14,742,149	1,331,118	15,810,904	1,303,889	15,328,917
Sand and gravel..... "	110,961,034	58,987,671	127,524,474	67,775,053	128,995,762	72,637,049
Stone..... "	32,767,925	39,857,134	30,512,920	43,736,687	31,549,708	43,449,462
Grand Totals.....	...	1,488,382,091	...	1,795,310,796	...	2,067,699,096

¹ Sulphur content of pyrite shipped and estimated sulphur contained in the sulphuric acid made from smelter gases.

Analysis of Current Value and Volume.—To assist in clearer and simpler interpretation of the trends in mineral production in Canada over the ten years 1947-56, the percentage of the total value contributed by each principal mineral in each year is given in Table 3. Values upon which percentages in this table are based are the annual values of mineral production, expressed in Canadian currency, as shown in Tables 1 and 2.

3.—Percentage of the Total Value Contributed by Principal Minerals 1947-56

Mineral	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Metallics¹	61.3	59.6	59.8	59.0	59.9	56.7	53.1	53.7	56.1	54.9
Copper.....	14.2	13.1	11.6	11.8	11.9	11.4	11.3	11.8	13.4	14.1
Gold.....	16.7	15.1	16.5	16.2	13.0	11.9	10.4	10.0	8.7	7.3
Iron ore.....	2.3	1.5	3.9	3.8	4.2	4.6	6.2	6.2	6.2	7.6
Lead.....	6.9	7.3	5.6	4.6	4.7	4.3	3.7	3.9	3.2	2.8
Nickel.....	11.0	10.6	11.0	10.7	12.1	11.8	12.0	12.1	12.0	10.8
Platinum metals.....	.5	2.0	2.2	1.7	1.8	1.4	1.5	1.4	1.3	1.1
Silver.....	1.4	1.5	1.5	1.8	1.8	1.6	1.8	1.7	1.4	1.2
Zinc.....	7.2	8.0	8.5	9.4	10.9	10.1	7.2	6.1	6.6	6.1
Non-metallics¹ (excluding Fuels)	8.5	8.2	7.1	9.0	9.3	9.7	9.4	8.8	8.1	8.3
Asbestos.....	5.1	5.1	4.4	6.3	6.5	6.9	6.4	5.8	5.4	5.3
Gypsum.....	0.7	0.7	0.6	0.6	0.5	0.5	0.6	0.5	0.4	0.4
Quartz.....	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Salt.....	0.7	0.6	0.6	0.7	0.6	0.6	0.5	0.6	0.6	0.7
Sulphur.....	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.4
Fuels	17.1	19.5	20.4	19.2	18.7	20.4	23.5	23.7	23.1	24.9
Coal.....	12.0	13.0	12.3	10.5	8.7	8.6	7.7	6.5	5.2	4.6
Natural gas.....	2.1	1.9	1.3	0.6	0.6	0.7	0.8	0.8	0.9	0.9
Petroleum.....	3.0	4.6	6.8	8.1	9.4	11.1	15.0	16.4	17.0	19.4
Structural Materials	13.1	12.7	12.7	12.7	12.1	13.1	14.0	13.8	12.7	11.9
Clay products.....	2.2	2.1	2.0	2.1	1.9	1.9	2.2	2.2	2.0	1.8
Cement.....	3.4	3.4	3.6	3.4	3.2	3.7	4.4	4.0	3.6	3.8
Lime.....	1.3	1.3	1.3	1.2	1.1	1.1	1.1	1.0	0.9	0.7
Sand and gravel.....	3.6	3.7	3.5	3.5	3.6	4.0	4.0	4.0	3.8	3.5
Stone.....	2.6	2.2	2.3	2.5	2.3	2.4	2.3	2.6	2.4	2.1
Grand Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Includes minor items not specified.

The total volume of mineral output attained a wartime peak in 1941 when the production index* stood at 132. Principally because of the steady recession in the mining of gold and other major metals during the next five years, the index gradually declined and reached a ten-year low point of 97 in 1946. Since then, sharp gains in the production of petroleum and other non-metals together with substantial increases in metals output resulted in a sustained advance to a record high level of 272.5 in 1956.

* The construction of this index, which is a component of the revised index of industrial production, is described in DBS Reference Paper, *Revised Index of Industrial Production, 1935-51*.

4.—Indexes of the Volume of Production of the Principal Mining Industries 1947-56

(1935=100)

NOTE.—Comparable figures from 1935 are given in the 1954 Year Book, p. 523.

Mineral	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Metallics	88.7	99.4	107.7	111.0	113.5	116.5	114.1	124.8	138.0	142.3
Gold.....	73.3	84.3	98.3	105.8	104.0	106.5	97.0	103.9	108.2	104.7
Silver.....	60.5	77.9	81.2	104.8	102.7	113.3	126.7	138.8	124.3	125.1
Copper.....	88.5	94.5	99.0	93.4	95.1	91.2	89.6	106.9	115.3	125.8
Nickel.....	122.2	135.9	132.8	127.7	141.2	144.2	147.4	163.4	180.6	184.4
Lead.....	83.3	86.1	67.7	64.6	61.6	65.1	76.3	85.6	78.6	73.5
Zinc.....	115.5	130.1	141.5	145.9	153.0	170.6	186.4	173.8	199.5	195.4
Non-metallics	189.2	204.3	175.4	247.2	271.9	267.3	258.1	264.3	304.4	316.3
Gypsum.....	280.0	349.3	346.4	403.6	371.4	370.3	393.8	405.5	476.4	506.0
Asbestos.....	163.1	176.9	141.8	218.5	245.3	245.2	232.3	235.9	268.0	271.4
Salt.....	178.9	177.7	181.2	207.2	233.1	234.6	231.2	232.2	310.0	385.9
Fuels	112.8	142.7	173.7	198.0	258.8	301.5	351.5	397.0	506.2	646.1
Coal.....	101.7	120.6	124.4	122.9	119.4	112.9	101.8	94.2	93.3	93.3
Petroleum.....	186.0	297.0	515.0	703.4	1,161.0	1,490.6	1,966.5	2,337.5	3,143.7	4,189.1
Natural gas.....	102.6	112.7	110.6	116.9	150.8	188.3	157.5	180.4	220.4	249.0
Total Mining	106.2	122.2	131.7	145.4	161.8	174.7	185.8	209.7	242.0	272.5

Subsection 2.—Provincial Distribution of Mineral Production

The continued rise in mineral production in 1956 was shared by all provinces except Nova Scotia where values dropped 0.8 p.c. The Yukon Territory also increased its output but the Northwest Territories reported a decline of 10.3 p.c.

Ontario again led the provinces, producing 31.0 p.c. by value of the mineral output of Canada. Although Ontario's physical production is rising rapidly, the percentage contribution of this Province to the Canadian total is slowly declining, having been 49.4 in 1940 and 35.1 in 1950. Ontario's advance of 9.8 p.c. in 1956 over 1955 resulted mainly from increases in nickel, copper and iron ore. Quebec retained second place, its share of the Canadian total being 20.6 p.c. as compared with 19.9 in 1955 and 21.1 in 1950. Quebec's increase in value of output in 1956 was 19.5 p.c., the highest gains being in copper, iron ore and asbestos. Alberta followed Quebec closely, contributing 19.8 p.c. of the nation's total in 1956, most of it made up of petroleum and natural gas. The increase in the Province in 1956 was 25.4 p.c.

British Columbia, with 9.6 p.c. of Canada's value of mineral production in 1956, contributed 77.7 p.c. of the lead, 52.4 p.c. of the zinc and 32.4 p.c. of the silver. Saskatchewan reported an increase in mineral production of 34.0 p.c. in 1956 and advanced its share of the Canadian total to 5.5 p.c. from 4.7 p.c. in the previous year. Newfoundland with a production doubled in value since 1954, also increased its portion of the Canadian total to 4.2 p.c. in 1956 from 3.8 p.c. in 1955, mostly as a result of heavier iron ore shipments. Manitoba and Nova Scotia each contributed 3.2 p.c. of the total in 1956. The decline in the latter province was caused by lower production of copper, lead and zinc. New Brunswick's contribution, though the lowest among the provinces, showed an encouraging increase of 15.3 p.c. in 1956.

5.—Detailed Mineral Production by Province 1956

NOTE.—Comparable details for 1955 have not been published in the Canada Year Book but are available in bulletin form from the Dominion Bureau of Statistics.

Mineral	Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	North-west Territories	Yukon	Canada
Metals..... \$	79,856,435	1,005,324	153,608	236,212, 792	512,355,992	39,209,137	70,676,751	4,111	157,712,200	21,601,772	15,565,247	1,134,354,370
Antimony..... lb.	—	—	—	—	—	—	—	—	1,820,000	—	—	1,820,000
Bismuth..... lb.	—	—	—	138,574	8,433	—	—	—	576,300	—	—	576,300
Cadmium..... lb.	—	—	—	223,182	18,975	—	—	—	126,000	—	—	273,007
Cobalt..... lb.	—	—	—	—	—	—	116,600	—	252,000	263,000	—	494,151
Copper..... lb.	—	—	—	—	—	42,800	198,220	—	1,845,784	—	—	2,258,184
Gold..... oz. t.	—	—	—	—	—	72,700	—	—	3,137,833	430,100	—	3,838,913
Indium..... oz. t.	—	—	—	—	—	112,369	—	—	—	—	—	3,685,956
Iron ore..... ton	—	—	—	—	—	9,054,800	—	—	—	—	—	9,372,760
Iron (remelt)..... ton	—	—	—	—	—	35,807,063	66,620,000	—	42,489,718	—	—	706,585,547
Lead..... lb.	—	—	—	—	—	14,824,124	27,580,680	119	17,590,743	352,645	73,240	291,469,615
Magnesium and calcium..... lb.	—	—	—	1,032,252	2,498,072	119,350	82,800	—	210,948	—	—	4,378,862
Manganese ore..... ton	—	—	—	35,550,759	86,033,601	4,110,414	2,851,632	4,098	7,265,050	12,145,094	2,522,386	150,808,010
Molybdenite..... lb.	—	—	—	—	—	—	—	—	358,000	—	—	358,000
Nickel..... lb.	—	—	—	—	—	—	—	—	805,500	—	—	805,500
Palladium, rhodium, etc. oz. t.	—	—	—	—	—	—	—	—	370,500	—	—	22,526,311
Platinum..... oz. t.	—	—	—	—	—	—	—	—	2,404,880	—	—	156,327,885
Selenium..... lb.	—	—	—	—	—	—	—	—	—	—	—	157,000
Silver..... oz. t.	—	—	—	—	—	—	—	—	290,277,493	25,779,000	—	6,339,000
Tellurium..... lb.	—	—	—	—	—	—	—	—	373,349,541	3,998,323	—	373,349,541
Tin..... lb.	—	—	—	—	—	—	—	—	45,022,040	—	—	57,906,514
Zinc..... lb.	—	—	—	—	—	—	—	—	—	—	—	5,617,826
Unidentified minerals..... \$	—	—	—	—	—	—	—	—	1,900	—	—	1,900
Total..... \$	—	—	—	—	—	—	—	—	—	—	—	1,452,028
Gold..... lb.	—	—	—	—	—	—	—	—	—	—	—	967,461
Silver..... lb.	—	—	—	—	—	—	—	—	—	—	—	355,886,460
Copper..... lb.	—	—	—	—	—	—	—	—	—	—	—	223,343,992
Lead..... lb.	—	—	—	—	—	—	—	—	—	—	—	161,600
Zinc..... lb.	—	—	—	—	—	—	—	—	—	—	—	6,495,065
Iron ore..... lb.	—	—	—	—	—	—	—	—	—	—	—	150,000
Coal..... lb.	—	—	—	—	—	—	—	—	—	—	—	15,585,000
Lumber..... lb.	—	—	—	—	—	—	—	—	—	—	—	508,000
Fisheries..... lb.	—	—	—	—	—	—	—	—	—	—	—	6,588,000
Agriculture..... lb.	—	—	—	—	—	—	—	—	—	—	—	28,794,572
Manufacturing..... oz. t.	—	—	—	—	—	—	—	14	9,330,881	69,807	6,170,700	25,831,613
Services..... oz. t.	—	—	—	—	—	—	—	13	8,370,733	62,678	5,535,735	5,535,735
Transportation..... lb.	—	—	—	—	—	—	—	—	—	—	—	24,000
Retail trade..... lb.	—	—	—	—	—	—	—	—	—	—	—	611,000
Construction..... lb.	—	—	—	—	—	—	—	—	—	—	—	521,550

5.—Detailed Mineral Production by Province 1956—concluded

Mineral	Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	North-west Territories	Yukon	Canada
Metals—concluded												
Titanium ore.....ton	—	—	—	4,443	—	—	—	—	—	—	—	4,443
Tungsten.....lb.	—	—	6,662	37,100	—	—	—	—	2,200,000	—	—	37,100
Uranium minerals ¹\$	—	—	10,992	—	—	—	—	—	6,060,992	—	—	2,206,662
Zinc.....lb.	74,280,000	2,846,750	354,380	175,809,222	5,891,000	36,200,000	24,292,000	—	443,711,493	9,394,000	20,788,000	39,577,000
\$	11,000,868	421,604	52,481	26,037,345	3,000,000	90,250,000	13,366,025	—	65,713,672	—	3,078,703	847,239,825
Non-metals\$	4,011,670	11,385,430	585,850	116,772,266	19,707,240	1,111,075	4,163,713	861,140	12,642,665	—	—	171,241,069
Arsenious oxide.....lb.	—	—	—	—	2,624,757	—	—	—	—	—	—	2,624,757
Asbestos.....ton	—	—	—	—	86,617	—	—	—	—	—	—	86,617
Barite.....ton	—	—	—	989,948	27,500	—	—	—	21,527	—	—	1,038,975
Feldspar.....ton	—	296,318	—	98,760,505	3,850,000	—	—	—	7,065,419	—	—	108,665,924
Fluorspar.....ton	—	2,248,769	—	—	—	—	—	—	11,490	—	—	307,808
Fluorspar.....\$	151,500	—	—	17,763	—	—	—	—	260,430	—	—	2,509,999
Gypsum.....ton	3,824,500	—	—	365,370	—	—	—	—	—	—	—	17,763
Iron oxide.....ton	40,000	4,434,406	79,069	—	11,065	180,000	—	—	—	—	—	365,370
Lithia.....lb.	—	—	—	—	377,932	302,000	—	—	81,398	—	—	151,738
Magnesian dolomite and ton	—	—	—	—	870,000	—	—	—	161,259	—	—	3,835,565
brucite.....\$	—	—	—	—	—	—	—	—	—	—	—	5,192,805
Mica.....gal.	—	—	—	7,757	—	—	—	—	—	—	—	8,300,585
Mineral water.....\$	—	—	—	170,135	—	—	—	—	—	—	—	7,757
Nepheline syenite.....ton	—	—	—	4,800,000	—	—	—	—	—	—	—	170,135
Peat, moss.....ton	—	1,004	8,225	2,412,000	35,850	—	—	—	—	—	—	4,800,000
Quartz.....ton	—	25,347	235,850	948,692	3,957	—	—	—	200,000	—	—	2,412,000
Salt.....ton	—	—	—	63,253	9,269	—	—	—	1,100	—	—	1,184,542
\$	—	—	—	300,000	3,500	—	—	—	—	—	—	173,622
gal.	—	—	—	155,000	2,000	—	—	—	—	—	—	308,500
ton	—	—	—	—	179,381	—	—	—	—	—	—	157,000
\$	—	—	—	—	2,489,633	—	—	—	—	—	—	179,381
ton	—	—	—	42,213	3,957	—	—	—	—	—	—	2,489,633
\$	—	—	—	866,771	89,046	5,880	—	—	63,785	—	—	725,074
ton	—	—	—	344,596	1,535,835	239,075	—	—	2,262,102	—	—	3,708,191
\$	—	—	—	1,232,129	1,232,129	—	—	—	46,250	—	—	2,714,415
ton	—	—	—	1,280,742	1,358,692	—	—	—	174,875	—	—	2,781,236
\$	—	—	—	—	9,002,376	—	—	—	—	—	—	1,593,431
ton	—	—	—	—	—	570,000	1,216,000	861,140	—	—	—	13,916,532

¹ Includes radium salts, silver, cobalt and uranium oxides.

6.—Value of Mineral Production by Province 1947-56

NOTE.—Figures for 1899-1910 are given in the 1933 Year Book, p. 345; for 1911-28 in the 1939 edition, p. 323; for 1929-44 in the 1946 edition, p. 323; and for 1945 and 1946 in the 1956 edition, p. 527.

Year	Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba
	\$	\$	\$	\$	\$	\$
1947.....	...	34,255,560	5,812,943	115,151,635	249,797,671	18,236,763
1948.....	...	56,400,245	7,003,285	152,038,867	294,239,673	26,081,349
1949.....	27,583,615	56,092,830	7,134,009	165,021,513	323,368,644	23,839,638
1950.....	25,824,047	59,482,173	12,756,975	220,176,517	366,801,525	32,691,173
1951.....	32,410,443	59,727,256	9,564,617	255,530,071	444,667,203	30,045,992
1952.....	32,512,313	64,552,383	11,298,960	270,483,962	444,669,412	25,105,045
1953.....	33,780,622	67,364,408	11,663,618	251,881,781	465,877,093	25,264,112
1954.....	42,898,033	73,450,808	12,468,322	278,818,070	496,747,571	35,106,922
1955.....	68,462,956	67,133,539	15,759,744	357,010,045	583,954,682	62,018,231
1956.....	87,752,025	66,625,229	18,171,654	426,608,242	640,915,058	66,711,747
	Saskatchewan	Alberta	British Columbia	Northwest Territories	Yukon Territory	Canada
	\$	\$	\$	\$	\$	\$
1947.....	32,594,016	67,432,270	116,772,621	2,720,988	2,095,508	644,869,975
1948.....	34,517,208	93,211,229	148,223,614	4,267,485	4,265,910	820,248,865
1949.....	36,054,536	113,728,425	136,385,911	6,801,729	5,099,176	901,110,026
1950.....	35,983,923	135,758,940	138,888,205	8,050,899	9,035,696	1,045,450,073
1951.....	51,032,953	168,144,211	176,278,932	8,288,747	9,793,170	1,245,483,595
1952.....	49,506,094	196,811,654	170,071,244	8,944,835	11,386,451	1,285,342,353
1953.....	48,081,970	248,863,295	158,487,812	10,300,230	14,738,562	1,336,303,503
1954.....	68,216,009	279,042,735	158,630,867	26,414,000	16,588,664	1,488,382,091
1955.....	85,150,128	325,974,326	189,524,574	25,597,821	14,724,750	1,795,310,796
1956.....	114,103,316	408,865,422	199,318,374	22,949,122	15,678,907	2,067,699,096

Subsection 3.—Production of Metallic Minerals

The metallic minerals of greatest dollar value produced in Canada during 1956 were: copper, nickel, iron, gold, zinc, lead, uranium, and silver. The most striking and important advance was recorded by uranium which became the seventh most valuable mineral produced in 1956, although the vast developments in this field were only then beginning to be reflected in production figures. The major metals, including uranium, are dealt with in the following paragraphs.

Copper.—Production in 1956 reached a record of 353,000 tons—8.4 p.c. over 1955 and higher than the former record of 328,000 tons established in 1940. The total value of \$291,500,000 was an increase of 21.6 p.c. in the year despite a softening in world copper prices, making copper Canada's most important metal in point of value.

Ontario led production with 43.8 p.c. of the Canadian total, and Quebec production rose 21.2 p.c. to 122,000 tons and accounted for 34.7 p.c. of the nation's total. Newfoundland increased production 11.5 p.c. to 3,400 tons and Saskatchewan showed a modest gain, but output in Manitoba and British Columbia declined slightly and in Nova Scotia ceased altogether.

7.—Copper Production by Province and Total Value 1947-56

NOTE.—Figures for 1886-1910 are given in the 1916-17 Year Book, p. 272; for 1911-28 in the 1939 edition, p. 335; for 1929-44 in the 1946 edition, p. 331; and for 1945 and 1946 in the 1956 edition, p. 532.

Year	Newfoundland	Quebec	Ontario	Manitoba	Saskatchewan	British Columbia	Canada	
							Quantity	Value
	tons	tons	tons	tons	tons	tons	tons	\$
1947.....	...	42,561	113,934	15,316	33,151	20,900	225,862	91,541,888
1948.....	...	48,813	120,383	18,960	31,074	21,502	240,732	107,159,756
1949.....	3,617	67,822	113,042	16,960	34,960	27,055	263,456	104,719,151

7.—Copper Production by Province and Total Value 1947-56—concluded

Year	New-foundland	Quebec	Ontario	Manitoba	Saskatchewan	British Columbia	Canada	
							Quantity	Value
	tons	tons	tons	tons	tons	tons	tons	\$
1950.....	3,221	72,891	117,210	20,817	28,982	21,086	264,207	123,211,407
1951.....	2,899	68,866	128,808	15,839	31,625	21,932	269,970 ¹	149,026,216 ¹
1952.....	2,959	68,846	125,343	9,374	30,344	20,786	258,038 ²	146,679,040 ²
1953.....	2,814	54,920	130,582	9,411	30,588	24,148	253,252 ³	150,953,712 ³
1954.....	3,481	83,930	140,776	12,274	36,192	25,088	302,732 ⁴	175,712,693 ⁴
1955.....	3,052	101,020	146,407	19,380	32,945	22,127	325,994 ⁵	239,756,455 ⁵
1956.....	3,403	122,459	154,599	17,904	33,310	21,245	353,293 ⁶	291,469,615 ⁶

¹ Includes one ton valued at \$536 produced in N.W.T. ² Includes 383 tons valued at \$218,663 produced in Nova Scotia and 3 tons valued at \$1,969 produced in N.W.T. ³ Includes 788 tons valued at \$471,962 produced in Nova Scotia. ⁴ Includes 991 tons valued at \$577,868 produced in Nova Scotia. ⁵ Includes 1,028 tons valued at \$757,758 produced in Nova Scotia and 35 tons valued at \$26,290 produced in New Brunswick. ⁶ Includes 357 tons valued at \$295,846 produced in Nova Scotia and 16 tons valued at \$12,896 produced in New Brunswick.

Nickel.—The output of nickel in 1956 was 3,000 tons higher than in 1955, reaching a total of 178,000 tons worth \$223,300,000.

Canada produced about 65 p.c. of the free world supply of nickel during 1956 mainly from smelters of the International Nickel Company of Canada and Falconbridge Mines Limited both of which are in the Sudbury, Ont., area. The Sherritt Gordon mine at Lynn Lake, Man., is the third largest Canadian producer of ore which is refined at Fort Saskatchewan, Alta. Two smaller mines near Sudbury—Nickel Rim and Nickel Offsets—ship nickel ore to Falconbridge Mines for treatment.

Canada uses only about 3,500 tons of refined nickel annually. Exports amounted to about 104,000 tons in 1956, mostly to the United States, and exports of nickel in matte, etc., amounted to 70,715 tons.

8.—Quantity and Value of Nickel Produced 1947-56

NOTE.—Figures for 1889-1910 are given in the 1929 Year Book, p. 368; for 1911-28 in the 1939 edition, p. 342; for 1929-44 in the 1946 edition, p. 333; and for 1945 and 1946 in the 1956 edition, p. 532.

Year	Quantity		Year	Quantity	
	tons	\$		tons	\$
1947.....	118,626	70,650,764	1952.....	140,559	151,349,438
1948.....	131,740	86,904,235	1953.....	143,643	160,430,098
1949.....	128,690	99,173,289	1954.....	166,299	180,173,392
1950.....	123,659	112,104,685	1955.....	174,928	215,866,007
1951.....	137,903	151,269,994	1956.....	177,993	223,343,992

Iron Ore.—A 42-p.c. increase in the value of shipments raised iron ore to third place among the metals of Canada, exceeding gold and zinc for the first time. Production of 22,526,000 tons of ore valued at \$156,300,000 reflected gains by all producing provinces except British Columbia where output dropped sharply.

Seven companies shipped ore or concentrates in 1956. The Iron Ore Company of Canada with mines in Quebec and Labrador produced high-grade, direct-shipping ore, mostly for the United States; Dominion Wabana Ore Limited, Bell Island, Nfld., shipped

heavy-media concentrates to the steel plant at Sydney, N.S., and for export; Steep Rock Iron Mines Limited in northern Ontario produced high-grade direct-shipping ore mainly for export to the United States. Algoma Ore Properties Limited also in northern Ontario produced high-grade sinter. In British Columbia, Texada Mines Limited on Texada Island and the Argonaut Mine on Vancouver Island produced a reduced tonnage of magnetite concentrates mainly for export to Japan.

Exports of iron ore in 1956 totalled over 20,000,000 tons valued at \$144,000,000. Of this total, 79 p.c. went to the United States and almost all of the remainder to Europe—mostly to the United Kingdom.

9.—Iron Ore Shipments and Production of Pig-Iron, Ferro-Alloys and Steel Ingots and Castings 1947-56

NOTE.—Figures for 1886-1910 are given in the 1936 Year Book, p. 373; for 1911-28 in the 1939 edition, p. 340; for 1929-44 in the 1946 edition, p. 333; and for 1945 and 1946 in the 1956 edition, p. 535.

Year	Iron Ore Shipments from Canadian Mines	Production of Pig-Iron			Production of Ferro-Alloys ¹	Production of Steel Ingots and Castings
		Nova Scotia	Ontario	Canada		
	tons	tons	tons	tons	tons	tons
1947.....	1,919,366	354,789	1,606,787	1,962,848 ²	227,123	2,945,952
1948.....	1,337,244	438,430	1,687,309	2,125,739	232,734	3,200,480
1949.....	3,675,096	472,885	1,681,600	2,154,485	202,092	3,190,377
1950.....	3,605,261	513,029	1,804,092	2,317,121	180,499	3,383,575
1951.....	4,680,510	485,900	2,066,993	2,552,893	266,252	3,568,720
1952.....	5,271,849	395,262	2,286,323	2,681,585	232,117	3,703,111
1953.....	6,509,818	440,005	2,572,263	3,012,268	153,660	4,116,068
1954.....	7,361,598	314,297	1,896,732	2,211,029	116,141	3,195,030
1955.....	16,283,177	402,759	2,812,608	3,215,367	189,805	4,534,672
1956.....	22,526,311	466,306	3,101,890	3,568,196	243,809	5,305,805

¹ Factory shipments since 1953.

² Includes production of 1,272 tons in British Columbia.

Gold.—Production of gold declined 3.6 p.c. in quantity and 3.8 p.c. in value in 1956 compared with 1955. Slight declines were recorded by all producing provinces except Newfoundland, and by the Yukon and Northwest Territories. The increase in production in the Northwest Territories was 9.7 p.c. Canada, despite the small decline in production, retained its position as the third largest producer in the world, accounting for about 13 p.c. of world output.

10.—Quantity and Value of Gold Produced by Province 1947-56

NOTE.—Values are calculated at world prices in Canadian funds. Figures for 1862-1910 are given in the 1916-17 Year Book, pp. 268-269; for 1911-28 in the 1939 edition, pp. 336-337; for 1929-44 in the 1946 edition, p. 332; and for 1945 and 1946 in the 1956 edition, p. 533.

Year	Newfoundland		Nova Scotia		Quebec		Ontario	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	oz. t.	\$	oz. t.	\$	oz. t.	\$	oz. t.	\$
1947.....	...	...	1,271	44,485	598,127	20,934,445	1,944,819	68,068,665
1948.....	...	...	188	6,580	770,625	26,971,875	2,095,377	73,338,195
1949.....	9,269	333,684	64	2,304	964,184	34,710,624	2,354,509	84,762,324
1950.....	9,254	352,115	65	2,473	1,094,645	41,651,242	2,481,110	94,406,236
1951.....	8,515	313,778	17	626	1,067,306	39,330,226	2,462,979	90,760,776
1952.....	8,595	294,551	1,433	49,109	1,113,204	38,149,501	2,513,691	86,144,190
1953.....	7,654	263,451	3,248	111,796	1,021,698	35,166,845	2,182,437	75,119,481
1954.....	6,528	222,409	3,754	127,899	1,098,570	37,428,280	2,361,385	80,452,387
1955.....	6,337	218,753	3,880	133,938	1,154,522	39,854,099	2,523,040	87,095,340
1956.....	8,400	289,296	1,036	35,680	1,032,252	35,550,759	2,498,072	86,033,601

10.—Quantity and Value of Gold Produced by Province 1947-56—concluded

Year	Manitoba		Saskatchewan		Alberta		British Columbia	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	oz. t.	\$	oz. t.	\$	oz. t.	\$	oz. t.	\$
1947.....	72,906	2,551,710	93,747	3,281,145	78	2,730	249,011	8,715,385
1948.....	106,176	3,716,160	87,927	3,077,445	78	2,730	306,998	10,744,930
1949.....	137,399	4,946,364	94,208	3,391,488	115	4,140	304,307	10,955,052
1950.....	191,725	7,295,136	79,784	3,035,781	152	5,784	290,490	11,053,144
1951.....	163,914	6,040,231	110,216	4,061,460	97	3,574	289,992	10,686,205
1952.....	141,947	4,864,524	93,585	3,207,158	111	3,804	273,059	9,357,732
1953.....	131,309	4,519,656	88,327	3,040,215	65	2,237	264,976	9,120,474
1954.....	134,944	4,597,542	101,785	3,467,815	195	6,644	268,508	9,148,068
1955.....	123,888	4,276,614	83,580	2,885,182	214	7,387	252,979	8,732,835
1956.....	119,350	4,110,414	82,800	2,851,632	119	4,098	210,948	7,265,050

Year	Northwest Territories		Yukon Territory		Canada	
	Quantity	Value	Quantity	Value	Quantity	Value
	oz. t.	\$	oz. t.	\$	oz. t.	\$
1947.....	62,517	2,188,095	47,745	1,671,075	3,070,221	107,457,735
1948.....	101,625	3,556,875	60,614	2,121,490	3,529,608	123,536,280
1949.....	177,493	6,389,748	81,970	2,950,920	4,123,518	148,446,648
1950.....	200,663	7,635,227	93,339	3,551,549	4,441,227	168,988,687
1951.....	212,211	7,819,975	77,504	2,856,022	4,392,751	161,872,873
1952.....	247,581	8,484,601	78,519	2,690,846	4,471,725	153,246,016
1953.....	289,929	9,979,356	68,080	2,274,474	4,055,723	139,597,985
1954.....	308,563	10,512,741	82,208	2,800,826	4,366,440	148,764,611
1955.....	321,321	11,092,001	72,201	2,492,379	4,541,962	156,788,528
1956.....	352,645	12,145,094	73,240	2,522,986	4,378,862	150,808,010

Zinc.—In 1956, zinc production (including refined zinc, zinc ores and concentrates) fell 2.2 p.c. to 424,000 tons from the record high of 433,000 tons established in 1955. Of the 1956 total, 256,000 tons were refined zinc. Nearly all of the zinc concentrates produced in Eastern Canada—about 128,000 tons or 30.2 p.c. of the Canadian total—were exported. Total exports of zinc concentrates in 1956 amounted to 199,000 tons, and exports of refined zinc to 184,000 tons.

11.—Quantity and Value of Zinc Produced 1947-56

NOTE.—Figures for 1911-28 are given in the 1939 Year Book, p. 347; for 1929-44 in the 1946 edition, p. 335; and for 1945 and 1946 in the 1956 edition, p. 534.

Year	Quantity ¹	Value	Average Price per lb.	Year	Quantity ¹	Value	Average Price per lb.
	tons	\$	cts.		tons	\$	cts.
1947.....	207,863	46,686,010	11.23	1952.....	371,802	129,833,285	17.46
1948.....	234,164	65,237,956	13.93	1953.....	401,762	96,101,386	11.96
1949.....	288,264	76,372,147	13.25	1954.....	376,491	90,207,285	11.98
1950.....	313,227	98,040,145	15.65	1955.....	433,357	118,306,466	13.65
1951.....	341,112	135,762,643	19.90	1956.....	423,620	125,476,218	14.84

¹ Estimated foreign smelter recoveries and refined zinc produced in Canada.

Lead.—Primary lead production dropped 7.9 p.c. in 1956 to 187,000 tons worth \$57,900,000; this followed a decline of 7.2 p.c. in 1955. Output of refined lead amounted to 148,000 tons with exports totalling 80,000 tons. Additional exports of lead in concentrates amounted to 50,000 tons.

British Columbia's mines produced 77.7 p.c. of Canada's lead in 1956. The Consolidated Mining and Smelting Company of Canada at Trail is by far the principal producer and operates the only lead refinery in Canada. Production in Newfoundland in 1956 was 23,000 tons, and in Yukon 13,000 tons; the remainder was mined mostly in Quebec and Ontario. Canada used about 66,000 tons domestically in 1956, a slight decrease from 1955.

12.—Quantity and Value of Lead Produced from Canadian Ores 1947-56

NOTE.—Figures for 1887-1910 are given in the 1929 Year Book, p. 367; for 1911-28 in the 1939 edition, p. 341; for 1929-44 in the 1946 edition, p. 333; and for 1945 and 1946 in the 1956 edition, p. 534.

Year	Quantity tons	Value \$	Year	Quantity tons	Value \$
1947.....	161,668	44,200,124	1952.....	168,842	54,671,021
1948.....	167,251	60,344,146	1953.....	193,706	50,076,822
1949.....	159,775	50,488,879	1954.....	218,495	58,250,831
1950.....	165,697	47,886,452	1955.....	202,762	58,314,500
1951.....	158,231	58,229,146	1956.....	186,675	57,906,514

Uranium.—Uranium production began in Canada in 1942 when this country joined with the United Kingdom and the United States to develop the atom bomb. The Port Radium mine of Eldorado Mining and Refining Limited supplied the initial production and from this modest beginning the uranium mining industry has grown to a total of six producers capable of processing in excess of 10,700 tons of ore per day. Current estimates indicate the operation of 22 mills with a production capacity of 42,000 tons of ore per day.

Uranium mineralization has been found at intervals along the western and southern edges of the Canadian Shield. Production, however, is from four areas within this belt: Great Bear Lake, N.W.T., Beaverlodge, Sask., Blind River, Ont., and Bancroft, Ont. All uranium production must be sold to the Canadian Government. In December 1956 official restrictions concerning uranium production and ore reserves were lifted. The production of uranium is shown for three years in Table 13, the figures representing the value of products shipped from the refinery at Port Hope, Ont.

13.—Value of Uranium by Province 1954-56

NOTE.—Figures represent value of products shipped from the refinery at Port Hope, Ont.

Year	Ontario	Saskatchewan	Northwest Territories	Canada
	\$	\$	\$	\$
1954.....	—	10,981,417	15,486,157	26,467,574
1955.....	487,054	12,312,471	13,232,079	26,031,604
1956.....	5,891,000	24,292,000	9,394,000	39,577,000

Silver.—Silver production in 1956 recorded a gain of 2.9 p.c. in quantity and of 4.7 p.c. in value compared with 1955 but was still below the record output of 1954. About 82 p.c. of the silver produced came from the refining of base metal ores, 15 p.c. from silver-cobalt and silver ores, and 3 p.c. from gold ores.

British Columbia produced 32.4 p.c. of the Canadian total, the Yukon 21.4 p.c., Ontario 22.5 p.c. and Quebec 14.4 p.c. Most of the production goes out of the country. Of the 14,300,000 oz. t. of silver bullion exported in 1956, over 13,000,000 oz. t. went to the United States. In addition, Canada exported 6,900,000 oz. t. of silver in ores and concentrates of which over 90 p.c. went to the United States.

Canada holds third place in world production, following Mexico and the United States.

14.—Quantity of Silver Produced by Province and Total Value 1947-56

NOTE.—Figures for 1887-1910 are given in the 1916-17 Year Book, p. 271; for 1911-28 in the 1939 edition, p. 345; for 1929-44 in the 1946 edition, p. 334; and for 1945 and 1946 in the 1956 edition, p. 535.

Year	Average Price per oz. t. (Canadian funds)	Newfoundland	Nova Scotia	Quebec	Ontario	Manitoba
	cts.	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.
1947.....	72.00	...	97	2,134,189	2,342,032	424,365
1948.....	75.00	...	8	2,376,754	3,210,107	737,298
1949.....	74.25	585,966	3	3,250,578	2,562,859	554,266
1950.....	80.82	575,524	2	4,343,379	4,408,620	893,099
1951.....	94.55	534,519	1	4,154,290	4,520,094	613,141
1952.....	83.52	638,524	91,886	4,536,247	6,491,124	412,149
1953.....	84.01	648,389	226,225	4,571,373	5,154,619	429,508
1954.....	83.26	742,120	262,361	4,907,304	5,443,721	411,125
1955.....	88.18	701,792	262,067	4,786,695	6,051,017	454,528
1956.....	89.68	919,410	79,054	4,135,831	6,478,777	432,830
	Saskatchewan	British Columbia	Northwest Territories	Yukon Territory	Canada ¹	
	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.	\$
1947.....	1,282,546	5,903,367	45,355	372,051	12,504,018	9,002,893
1948.....	1,323,900	6,717,908	25,382	1,718,618	16,109,982	12,082,487
1949.....	1,482,009	7,573,506	70,505	1,562,730	17,641,493	13,098,808
1950.....	1,207,796	8,528,107	62,111	3,202,779	23,221,431	18,767,561
1951.....	1,454,341	8,342,414	64,228	3,442,788	23,125,825	21,865,467
1952.....	1,179,514	7,784,964	59,258	4,028,551	25,222,227	21,065,603
1953.....	1,257,622	9,308,874	63,592	6,639,127	28,299,335	23,774,271
1954.....	1,474,370	10,825,614	59,037	6,992,279	31,117,949	25,907,870
1955.....	1,230,179	8,702,122	58,477	5,712,219	27,984,204	24,676,472
1956.....	1,169,400	9,330,881	69,867	6,170,700	28,794,573	25,831,612

¹ Includes relatively small quantities produced in New Brunswick and Alberta.

Metals of the Platinum Group.—Total production of platinum, palladium, rhodium, ruthenium and iridium fell 73,000 oz. t. below 1955 production in 1956 to 312,000 oz. t. Total dollar value dropped very slightly to \$22,100,000 in 1956, of which platinum values were \$15,600,000. All of the platinoid metals were produced in Ontario, mainly from the nickel-copper ores in the Sudbury area.

These metals are recovered in the form of residues in the electrolytic refinery tanks at Port Colborne, Ont., and some at the refinery in Norway to which Falconbridge Nickel Company Limited ships nickel-copper matte.

15.—Quantity and Value of Platinum and Palladium¹ Produced 1947-56

NOTE.—Comparable figures for 1921-39 are given in the 1940 Year Book, p. 340 and for 1940-46 in the 1951 edition, p. 513.

Year	Platinum		Palladium ¹		Year	Platinum		Palladium ¹	
	oz. t.	\$	oz. t.	\$		oz. t.	\$	oz. t.	\$
1947.....	94,570	5,582,467	110,332	4,387,740	1952....	122,317	10,916,792	157,407	7,559,109
1948.....	121,404	10,622,850	148,343	6,295,132	1953....	137,545	12,550,981	166,018	7,495,409
1949.....	153,784	11,603,002	182,233	8,289,915	1954....	154,356	12,950,469	189,350	7,956,087
1950.....	124,571	10,255,929	148,741	7,578,144	1955....	170,494	14,747,732	214,252	8,321,633
1951.....	153,483	14,542,515	164,905	7,950,107	1956....	150,000	15,585,000	161,600	6,495,065

¹ Includes also iridium, rhodium, ruthenium.

Subsection 4.—Production of Non-metallic Minerals (excluding Fuels)

Asbestos is by far the most important item in this group in point of value, followed in order by salt, gypsum and sulphur, which are treated separately below. The group also includes such minerals as titanium dioxide, fluorspar, barite, diatomite, magnesitic dolomite, nepheline syenite, peat moss, quartz and sodium sulphate.

Asbestos.—Despite a 2.3 p.c. decline in shipments of asbestos in 1956 as compared with 1955, the Canadian asbestos industry had the second highest production in its history, shipping 1,039,000 tons of various grades of fibre. Higher prices brought the 1956 value to \$109,700,000, a gain of 14.0 p.c. over the 1955 total. The slight decline in tonnage resulted from decreased use of asbestos in the United States and from intensified competition from Russia in the European market.

Quebec, with eight producing mines, accounted for 95.3 p.c. of the Canadian total, Ontario had one producer which recorded an output of 28,000 tons in 1956 and another mine in British Columbia contributed 22,000 tons. Exports of 964,000 tons in 1956 went mostly to the United States.

16.—Quantity and Value of Asbestos Produced 1947-56

NOTE.—Figures for 1896-1910 are given in the 1911 Year Book, p. 424; for 1911-28 in the 1939 edition, p. 354; for 1929-44 in the 1946 edition, p. 353; and for 1945 and 1946 in the 1956 edition, p. 537.

Year	Quantity	Value	Year	Quantity	Value
	tons	\$		tons	\$
1947.....	661,821	33,005,748	1952.....	929,339	89,254,913
1948.....	716,769	42,231,475	1953.....	911,226	86,052,895
1949.....	574,906	39,746,072	1954.....	924,116	86,409,212
1950.....	875,344	65,854,568	1955.....	1,063,802	96,191,317
1951.....	973,198	81,584,345	1956.....	1,038,975	109,665,924

Salt.—Production from the brine wells of Ontario increased 36.0 p.c. in 1956 over 1955 with increases in Manitoba and Saskatchewan. Alberta production equalled that of 1955 but dollar-value dropped from \$1,000,000 to \$900,000 in 1956. Salt produced in Nova Scotia mines dropped 17,000 tons during the year but value increased \$459,000. Total Canadian production in 1956 was 28.0 p.c. more than in 1955.

17.—Quantity of Salt Produced by Province and Total Value 1947-56

NOTE.—Figures for the years 1926-44 are given in the 1946 Year Book, p. 354, and for 1945 and 1946 in the 1956 edition, p. 538.

Year	Nova Scotia	Ontario	Manitoba	Saskat- chewan	Alberta	Canada	
	tons	tons	tons	tons	tons	tons	\$
1947.....	40,107	633,766	24,974	—	29,698	728,545	4,436,930
1948.....	61,799	619,598	25,251	—	34,613	741,261	4,536,028
1949.....	86,612	607,206	18,734	8,103	28,359	749,014	5,566,725
1950.....	101,930	696,582	16,592	18,186	25,606	858,896	7,011,306
1951.....	127,252	772,585	16,778	28,192	19,718	964,525	7,905,977
1952.....	138,845	757,025	18,113	33,540	24,380	971,903	7,774,815
1953.....	127,819	749,046	18,078	35,100	24,885	954,928	6,974,501
1954.....	150,589	733,066	17,809	37,227	31,196	969,887	8,340,163
1955.....	144,862	898,789	18,954	40,748	41,408	1,244,761	10,122,299
1956.....	127,864	1,358,692	22,400	42,905	41,270	1,593,131	13,916,532

Gypsum.—A record total of 5,200,000 tons of gypsum was produced in 1956 valued at \$8,300,000. Exports of 3,800,000 tons nearly all went to the United States and were up 26.4 p.c. over 1955. Nova Scotia produced 85.4 p.c. of the total output.

18.—Quantity of Gypsum Produced by Province and Total Value 1947-56

NOTE.—Figures for 1926-43 are given in the 1943-44 Year Book, p. 321; for 1944 in the 1955 Year Book, p. 527; and for 1945 and 1946 in the 1956 edition, p. 538.

Year	Nfld.	Nova Scotia	New Brunswick	Ontario	Manitoba	British Columbia	Canada	
	tons	tons	tons	tons	tons	tons	tons	\$
1947.....	—	2,137,704	65,939	155,249	79,356	58,736	2,496,984	4,734,853
1948.....	—	2,795,848	61,534	182,303	94,698	82,426	3,216,809	5,548,245
1949.....	—	2,555,795	80,436	203,187	94,918	79,913	3,014,249	5,423,690
1950.....	—	3,185,199	82,641	199,314	114,555	84,627	3,666,336	6,707,506
1951.....	—	3,190,030	109,469	262,581	134,704	105,908	3,802,692	5,880,853
1952.....	8,660	2,969,312	110,183	278,992	130,934	92,702	3,590,783	6,538,074
1953.....	26,531	3,050,832	120,816	334,495	163,313	145,470	3,841,457	7,399,884
1954.....	26,653	3,168,134	88,856	357,432	162,037	147,310	3,950,422	7,094,671
1955.....	46,459	3,838,847	90,096	366,416	176,005	150,078	4,667,901	8,037,153
1956.....	40,000	4,434,406	79,069	377,932	180,000	81,398	5,192,805	8,300,585

Sulphur.—Figures in Table 19 represent the quantity and value of sulphur contained in iron pyrite shipments and in derivatives from smelter gases such as sulphur dioxide, sulphuric acid, etc. Sulphur refined from natural gas production is not included.

During 1956 production increased 135,000 tons and value \$1,500,000. In Canada sulphur is used in the treatment of sulphite pulps and in the manufacture of rayon, explosives, rubber goods, petroleum refining, matches and insecticides.

19.—Quantity and Value of Sulphur Produced 1947-56

NOTE.—Figures for 1926-44 are given in the 1946 Year Book, p. 355 and for 1945 and 1946 in the 1956 edition, p. 539.

Year	Quantity	Value	Year	Quantity	Value
	tons	\$		tons	\$
1947.....	221,781	1,822,867	1952.....	423,788	3,851,183
1948.....	229,463	1,836,358	1953.....	358,850	3,172,698
1949.....	261,871	2,039,384	1954.....	532,406	4,875,969
1950.....	301,172	2,189,660	1955.....	628,443	5,984,953
1951.....	371,790	3,120,785	1956.....	763,736	7,440,410

Subsection 5.—Production of Fuels

Coal.—During 1956 all coal-producing provinces except Alberta showed increased production, thus checking the downward trend that began in 1950.

Nova Scotia produced 38.8 p.c. of the total tonnage and Saskatchewan 15.4 p.c. Alberta's contribution declined to 29.2 p.c. Exports of Canadian coal remained approximately the same as for 1955 but imports increased by 14.5 p.c.

20.—Coal Production by Province 1947-56

NOTE.—Figures for 1874-1910 are given in the 1911 Year Book, p. 419; for 1911-28 in the 1939 edition, p. 348; for 1929-44 in the 1946 edition, p. 347; and for 1945 and 1946 in the 1956 edition, p. 539.

Year	Nova Scotia	New Brunswick	Saskatchewan	Alberta	British Columbia	Yukon Territory	Canada	
	tons	tons	tons	tons	tons	tons	tons	\$
1947.....	4,118,196	345,194	1,571,147	8,070,430	1,763,899	—	15,868,866	77,475,017
1948.....	6,430,991	522,136	1,589,172	8,123,255	1,780,334	3,801	18,449,689	106,684,008
1949.....	6,181,779	540,806	1,870,487	8,616,855	1,906,963	3,153	19,120,043	110,915,121
1950.....	6,478,405	607,116	2,203,223	8,116,220	1,730,445	3,703	19,139,112	110,140,399
1951.....	6,307,629	653,439	2,223,318	7,659,329	1,739,412	3,696	18,586,823	109,038,855
1952.....	5,905,265	742,823	2,083,465	7,194,757	1,644,250	8,442	17,579,002	111,026,149
1953.....	5,787,026	721,252	2,021,304	5,917,474	1,443,006	10,611	15,900,673	102,721,875
1954.....	5,842,896	781,271	2,116,740	4,859,049	1,299,510	14,113	14,913,579	96,600,266
1955.....	5,731,026	877,838	2,293,816	4,455,279	1,453,881	7,040	14,818,880	93,579,471
1956.....	5,787,915	983,482	2,302,948	4,361,274	1,469,791	9,623	14,915,033	95,466,866

21.—Imports of Anthracite, Bituminous and Lignite Coal 1947-56

NOTE.—Figures for 1868-1910 are given in the 1911 Year Book, p. 420; for 1911-28 in the 1939 edition, p. 349; for 1929-44 in the 1946 edition, p. 348; and for 1945 and 1946 in the 1956 edition, p. 539.

Year	Anthracite ¹		Bituminous ²		Lignite		Totals ³	
	tons	\$	tons	\$	tons	\$	tons	\$
1947.....	4,281,682	41,012,759	24,610,045	97,935,771	203	1,255	28,891,930	138,949,785
1948.....	5,244,837	56,380,098	25,614,443	129,929,580	14,632	78,073	30,873,912	186,387,751
1949.....	3,945,135	45,656,328	18,233,528	95,403,106	16,547	89,629	22,195,210	141,149,063
1950.....	4,286,383	54,285,320	22,660,969	120,443,963	7,471	34,848	26,954,823	174,764,131
1951.....	3,853,431	51,244,639	22,938,824	116,802,323	9,150	42,486	26,801,405	168,089,448
1952.....	3,894,863	49,430,308	21,030,503	101,203,443	7,487	33,403	24,932,853	150,667,154
1953.....	2,989,054	40,088,265	20,273,425	96,464,453	3,062	14,735	23,265,541	136,567,453
1954.....	2,754,882	33,163,183	15,822,283	71,617,515	2,824	14,500	18,579,989	104,795,198
1955.....	2,646,503	30,190,088	17,094,480	76,352,171	1,548	8,663	19,742,531	106,550,922
1956.....	2,545,627	30,060,480	20,065,807	98,666,368	1,940	9,822	22,613,374	128,736,670

¹ Includes anthracite dust.

² Includes coal ex-warehoused for ships' stores.

³ Canada also imported 245,678 tons of briquettes of coal or coke valued at \$2,233,654 in 1947, 308,753 tons valued at \$3,204,839 in 1948, 186,971 tons valued at \$2,185,707 in 1949, 191,134 tons valued at \$2,316,570 in 1950, 170,157 tons valued at \$2,061,798 in 1951, 155,597 tons valued at \$1,868,619 in 1952, 128,673 tons valued at \$1,601,376 in 1953, 128,163 tons valued at \$1,583,610 in 1954, 124,216 tons valued at \$1,536,347 in 1955 and 126,724 tons valued at \$1,581,699 in 1956.

22.—Exports of Domestic Coal 1947-56

NOTE.—Figures for 1868-1910 are given in the 1911 Year Book, p. 421; for 1911-28 in the 1939 edition, p. 349; for 1929-44 in the 1946 edition, p. 348; and for 1945 and 1946 in the 1956 edition, p. 540.

Year	Quantity	Value	Year	Quantity	Value
	tons	\$		tons	\$
1947.....	714,549	5,440,788	1952.....	388,960	3,203,522
1948.....	1,273,262	11,555,985	1953.....	255,274	1,999,908
1949.....	432,043	3,563,892	1954.....	219,346	1,716,435
1950.....	394,961	3,198,040	1955.....	592,782	4,870,598
1951.....	435,083	3,495,664	1956.....	594,166	4,710,030

The sources of coal consumed in Canada in the years 1947-56 are shown in Table 23 and detailed figures of coal made available for consumption in 1955 and 1956 are given in Table 24; the difference between the totals of the two tables in the same year is accounted for by the fact that coal received may be held in bond at Canadian ports and not cleared for consumption until required, and coal received in previous years may be taken out of bond (cleared for consumption) in a later year. Normally the coal made available for consumption is greater than the apparent domestic consumption as coal is landed at

Canadian ports and re-exported or ex-warehoused for ships' stores without being taken out of bond but, while remaining in bond at the port, it is available for domestic consumption if required.

23.—Consumption of Canadian and Imported Coal in Canada 1947-56

Note.—Figures for 1886-1910 are given in the 1921 Year Book, p. 354; for 1911-28 in the 1939 edition, p. 350; for 1929-44 in the 1946 edition, p. 349; and for 1945 and 1946 in the 1956 edition, p. 540.

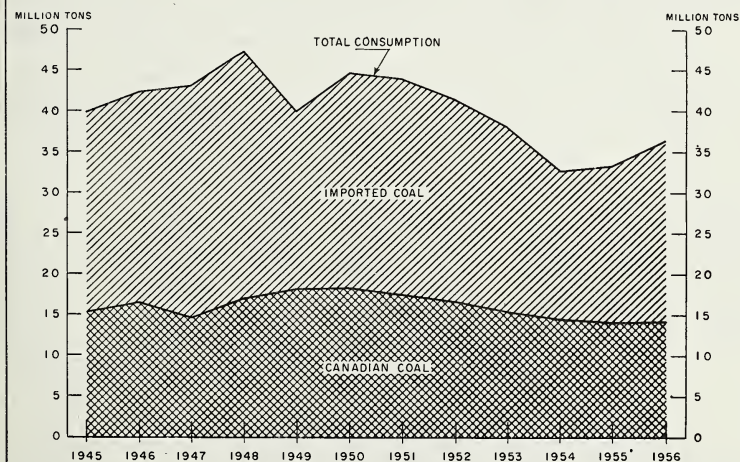
Year	Canadian Coal ¹		Imported Coal 'Entered for Consumption'				Grand Total	Consumption per Capita ³
			From United States	From United Kingdom	Total ²			
	tons	p.c.	tons	tons	tons	p.c.	tons	tons
1947.....	14,673,967	34.0	28,410,149	52,777	28,462,242	66.0	43,136,209	3.45
1948.....	16,928,023	36.0	30,295,841	162,550	30,454,917	64.0	47,382,945	3.70
1949.....	18,104,626	45.3	21,501,583	331,457	21,833,057	54.7	39,937,683	2.97
1950.....	18,224,944	40.6	26,224,893	423,874	26,649,049	59.4	44,873,993	3.27
1951.....	17,571,154	39.8	26,232,211	291,656	26,523,921	60.2	44,095,075	2.92
1952.....	16,749,416	40.5	24,248,804	356,032	24,603,789	59.5	41,353,205	2.87
1953.....	15,240,105	40.0	22,548,793	352,383	22,900,392	60.0	38,140,497	2.58
1954.....	14,466,212	44.0	18,054,962	266,304	18,322,056	56.0	32,788,268	2.16
1955.....	14,060,039	42.1	19,053,434	269,898	19,322,134	57.9	33,382,173	2.14
1956.....	14,115,095	38.9	22,045,485	153,404	22,198,049	61.1	36,313,144	2.26

¹ The sum of Canadian coal mines' sales, colliery consumption, coal supplied to employees and coal used in making coke, etc., less the tonnage of coal exported.

² Includes small tonnages from countries other than the United Kingdom and the United States. Deductions have been made from this column to take account of foreign coal re-exported from Canada and bituminous coal ex-warehoused for ships' stores.

³ Figures based on estimates of population given at p. 119.

CONSUMPTION OF COAL IN CANADA, 1945-1956

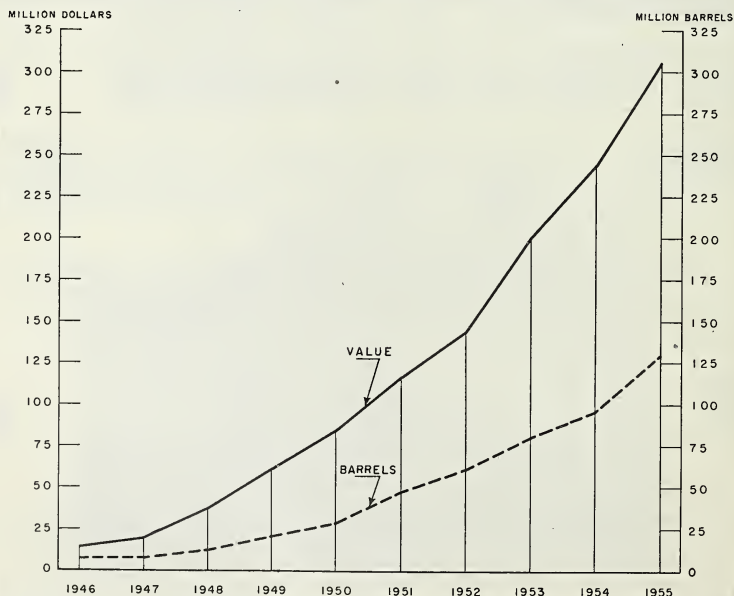


24.—Coal Made Available for Consumption in Canada 1955 and 1956Note.—For details by provinces, see DBS annual report, *The Coal Mining Industry*.

Grade	Canadian Coal				Coal Imported ¹		Coal Made Available for Consumption	
	Produced		Exported		1955	1956	1955	1956
	1955	1956	1955	1956				
	tons	tons	tons	tons	tons	tons	tons	tons
Anthracite.....	—	—	—	—	2,544,574	2,519,996	2,544,574	2,519,996
Bituminous.....	10,184,857	10,309,587	506,135	472,306	16,827,931	20,481,329	26,506,653	30,318,610
Subbituminous...	2,340,207	2,264,382	367	246	—	—	2,339,840	2,264,136
Lignite.....	2,293,816	2,341,641	101	4,950	—	—	2,293,715	2,336,691
Totals.....	14,818,880	14,915,610	506,603	477,502	19,372,505	23,001,325	33,684,782	37,439,433

¹ Coal reaching Canadian ports whether or not it is cleared through customs, exclusive of 117,508 tons of imported briquettes in 1955 and 118,975 tons in 1956.

Petroleum.—Of the record 1956 total of 170,600,000 bbl. of crude petroleum produced in Canada, 99.6 p.c. was produced west of Ontario. Alberta continued to lead all provinces with an output of 144,300,000 bbl., which was 84.6 p.c. of the national production and an increase of 27.7 p.c. over 1955. Saskatchewan and Manitoba accounted for 14.7 p.c. of the total with both provinces showing substantial gains during the year. British Columbia reported its first production in 1956.

PRODUCTION AND GROSS VALUE OF CRUDE PETROLEUM, 1946-55

25.—Quantity and Value of Crude Petroleum Produced by Province 1947-56

NOTE.—Figures for 1936-44 are given in the 1948-49 Year Book, p. 476, and for 1945 and 1946 in the 1956 edition, p. 541.

Year	New Brunswick	Ontario	Manitoba	Saskatchewan	Alberta	Northwest Territories	Canada
QUANTITY							
	bbl.	bbl.	bbl.	bbl.	bbl.	bbl.	bbl.
1947.....	23,129	131,295	—	540,117	6,770,477	227,474	7,692,492
1948.....	21,372	176,989	—	849,166	10,888,592	350,541	12,286,660
1949.....	19,544	260,670	—	782,188	20,087,418	155,528	21,305,348
1950.....	17,137	250,655	—	1,041,098	27,548,169	186,729	29,043,788
1951.....	15,551	197,171	10,698	1,249,281	45,915,384	227,449	47,615,534
1952.....	14,237	191,814	104,826	1,696,505	58,915,723	314,217	61,237,322
1953.....	14,738	299,685	653,514	2,797,888	76,816,383	316,689	80,898,897
1954.....	13,046	412,474	2,148,184	5,422,899	87,713,855	369,887	96,080,345
1955.....	12,548	525,510	4,145,756	11,317,168	113,035,046	404,219	129,440,247
1956.....	22,300	603,900	5,885,000	19,200,000	144,300,000	457,000	170,569,200 ¹
VALUE							
	\$	\$	\$	\$	\$	\$	\$
1947.....	32,381	350,000	—	614,156	18,078,907	500,238	19,575,682
1948.....	29,920	608,109	—	976,541	35,127,751	676,574	37,418,895
1949.....	27,362	901,143	—	836,941	58,999,936	353,108	61,118,490
1950.....	23,932	892,000	—	1,134,797	82,216,492	352,656	84,619,937
1951.....	21,771	677,905	26,478	1,659,045	113,870,152	399,887	116,655,238
1952.....	19,932	641,037	229,299	2,256,352	139,512,432	379,160	143,038,212
1953.....	20,633	994,835	1,714,806	3,833,107	193,761,644	257,251	200,582,276
1954.....	18,265	1,391,687	5,619,649	8,183,304	228,319,165	344,960	243,877,030
1955.....	17,567	1,599,335	9,618,154	18,317,968	274,901,232	1,185,780	305,640,036
1956.....	31,200	1,984,000	13,653,200	31,100,000	353,535,000	1,340,000	401,840,650 ¹

¹ Includes 101,000 bbl. valued at \$197,250 produced in British Columbia.

Natural Gas Production.—The estimated record flow of natural gas for all Canadian wells during 1956 was 173,300,000 M cu. feet. The production of natural gas in Canada is dependent upon markets and transportation. Some expansion in markets permitted an increase of 14.9 p.c. in natural gas recoveries in 1956. Alberta accounted for 86.6 p.c. of this amount but increases were shown by all producing provinces except New Brunswick. British Columbia reported its first small production from the Fort St. John area.

26.—Quantities of Natural Gas Produced by Province and Total Value 1947-56

NOTE.—Figures for 1920-28 are given in the 1940 Year Book, p. 347; for 1929-44 in the 1946 edition, p. 350; and for 1945 and 1946 in the 1956 edition, p. 543.

Year	New Brunswick	Ontario	Saskatchewan	Alberta	Northwest Territories	Canada	
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	\$
1947.....	489,810	7,785,921	274,193	44,106,643	—	52,656,567	13,429,558
1948.....	420,352	8,590,429	477,271	48,965,217	150,000	58,603,269	15,632,507
1949.....	375,035	8,024,213	812,916	51,179,779	65,234	60,457,177	11,620,302
1950.....	361,877	8,009,488	813,554	58,603,976	33,335	67,822,230	6,433,041
1951.....	261,579	8,442,842	860,082	69,876,831	19,333	79,460,667	7,158,920
1952.....	202,042	8,302,190	1,007,491	79,149,895	24,847	88,686,465	9,517,638
1953.....	177,112	9,708,969	1,422,128	89,651,605	26,109	100,985,923	10,877,017
1954.....	183,457	10,015,818	3,333,077	107,173,777	29,085	120,735,214	12,482,109
1955.....	186,549	10,852,857	6,706,743	133,007,493	18,670	150,772,312	15,098,508
1956.....	185,000	12,882,500	10,000,000	150,000,000	21,000	173,260,500	17,542,555 ¹

¹ Includes 172,000 M cu. feet valued at \$18,455 produced in British Columbia.

Subsection 6.—Production of Structural Materials

Continued high levels of construction in Canada raised the production of structural materials as a group to \$247,300,000 in 1956, the highest on record. The main advances were recorded in New Brunswick, Quebec, Ontario, Manitoba and Alberta. Minor gains

were recorded in all other provinces except Saskatchewan. Cement showed an increase of about 18 p.c. over 1955 and clay products 8 p.c. The output of sand, sand and gravel, and stone remained near the 1955 levels.

Cement.—In 1956, both the value and quantity of cement produced increased about 19 p.c. over 1955. The industry has nearly tripled its output during the past ten years and there are now 16 operating mills in Canada with an annual production capacity of almost 36,000,000 bbl. Factories under construction at Picton, Ont., and at Vancouver, B.C., will augment that capacity. In 1956, Quebec produced 36.4 p.c. of the Canadian total, Ontario 28.3 p.c., Alberta 12.4 p.c., Manitoba 10.6 p.c. and British Columbia 7.6 p.c.

27.—Quantity and Value of Production, Imports, Exports and Apparent Consumption of Cement 1947-56

NOTE.—Figures for 1910-28 are given in the 1939 Year Book, p. 356; for 1929-44 in the 1946 edition, p. 356; and for 1945 and 1946 in the 1956 edition, p. 545.

Year	Production ¹		Imports		Exports		Apparent Consumption
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity
	bbl. ²	\$	bbl. ²	\$	bbl. ²	\$	bbl. ²
1947.....	11,936,245	21,968,909	1,248,625	3,843,652	88,030	198,354	13,096,840
1948.....	14,127,123	28,264,987	1,120,671	3,995,173	72,999	200,575	15,174,795
1949.....	15,916,564	32,901,936	2,284,001	6,877,939	19,212	51,733	18,181,353
1950.....	16,741,826	35,894,124	1,886,219	3,788,981	23,909	111,351	18,104,136
1951.....	17,007,812	40,446,288	2,327,431	7,447,859	2,590	12,386	19,332,653
1952.....	18,520,538	48,059,470	2,913,981	9,068,181	4,305	20,686	21,430,214
1953.....	22,238,335	58,842,022	2,482,783	7,403,158	14,728	77,559	24,706,390
1954.....	22,437,477	59,035,644	2,292,200	6,316,890	123,702	496,058	24,605,975
1955.....	25,168,464	65,650,025	2,959,370	8,443,415	965,184	3,139,498	27,162,650
1956.....	29,719,377	77,876,046	3,426,426	8,078,334	711,775	1,984,908	32,434,028

¹ 'Production' as used here means quantity and value of sales.

² The barrel of cement equals 350 lb.

Clay Products.—The sales value of clay products produced in 1956 was the highest recorded. Common clays suitable for the production of building bricks and tile are found in all the provinces; production is greatest in Ontario and Quebec. Stoneware clays are produced largely from the Eastend and Willows areas in Saskatchewan and shipped to Medicine Hat, Alta., where, utilizing the cheap gas fuel, they are manufactured into stoneware, sewer pipe, pottery, tableware, etc. Stoneware clay also occurs in Nova Scotia and, although it has not been developed extensively for ceramic use, some is used for pottery. Two large plants and a few small plants manufacture fireclay refractories from domestic clay in British Columbia, Saskatchewan and Nova Scotia. Deposits of high-grade, plastic, white burning clays occur in northern Ontario and deposits yielding high-grade china clay have been found along the Fraser River in British Columbia but these have not been used on a commercial scale. Ball clays of high bond strength occurring in the white mud beds of southern Saskatchewan have not been developed to any extent.

28.—Value (Total Sales) of Clay Products Produced by Province 1947-56

NOTE.—Figures for 1926-44 are given in the 1946 Year Book, p. 356, and for 1945 and 1946 in the 1956 Year Book, p. 544.

Year	New-foundland	Nova Scotia	New Brunswick	Quebec	Ontario
	\$	\$	\$	\$	\$
1947.....	...	752,126	381,184	4,257,423	5,289,528
1948.....	...	1,031,685	434,772	5,123,908	6,563,754
1949.....	25,450	1,053,845	515,767	5,580,421	7,435,439
1950.....	31,089	1,126,969	681,139	6,324,387	9,323,263
1951.....	32,183	1,202,428	740,861	6,776,430	10,484,341
1952.....	29,285	1,221,893	655,084	6,645,387	11,975,200
1953.....	39,500	1,234,319	620,769	8,070,942	14,829,222
1954.....	33,042	1,082,039	587,994	8,055,692	17,230,231
1955.....	49,338	1,196,968	704,025	8,451,362	18,314,320
1956.....	49,000	1,185,301	751,600	9,501,527	19,864,542

28.—Value (Total Sales) of Clay Products Produced by Province 1947-56—concluded

Year	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
	\$	\$	\$	\$	\$
1947.....	392,518	495,016	1,771,250	1,147,144	14,486,189
1948.....	517,181	509,593	2,055,738	1,392,417	17,629,048
1949.....	514,705	545,588	1,603,199	707,295	17,981,709
1950.....	690,730	581,506	1,950,309	1,081,496	21,790,888
1951.....	673,698	616,655	1,787,731	1,213,329	23,527,656
1952.....	575,088	711,778	1,964,618	1,183,195	24,961,528
1953.....	568,477	742,959	2,135,085	1,536,458	29,777,731
1954.....	512,989	844,398	2,316,982	1,696,731	32,360,098
1955.....	635,554	992,307	2,800,481	2,115,415	35,259,770
1956.....	537,300	1,026,567	3,055,020	2,091,255	38,062,112

Sand, Gravel and Stone.—Deposits of sand and gravel are numerous throughout Eastern Canada with the exception of Prince Edward Island where gravels are scarce. The local needs for these materials are usually supplied from the nearest deposits as their cost to the consumer is governed largely by the length of the haul. This accounts for the large number of small pits and the small number of large plants. Every province except New Brunswick and Prince Edward Island produces natural bonded sand but some grades particularly suitable for certain industries demand a much higher price than ordinary sand. Quebec and Ontario contributed 71.3 p.c. of the total quantity of sand and gravel in 1956. The greater part of the output is used in road improvement, concrete works and railway ballast, and most of the commercial plants are equipped for producing crushed gravel, a product that can compete with crushed stone.

The stone industry has two main divisions, stone quarrying and the stone products industry. The granite, limestone, marble, sandstone and slate quarries of Canada yield high grade structural and decorative materials and also supply requirements for chemical and other allied industries. The gross value of stone of all varieties produced in Canada in 1956 totalled \$48,809,918 as compared with \$43,736,687 in 1955.

29.—Quantity and Value of Sand, Sand and Gravel, and Stone Produced 1954-56

Material and Purpose	1954		1955		1956	
	Quantity	Gross Value	Quantity	Gross Value	Quantity	Gross Value
	tons	\$	tons	\$	tons	\$
Sand—						
Moulding sand.....	18,331	48,544	15,838	43,468	26,871	71,163
For building, concrete, roads, etc..	8,961,378	6,950,734	12,341,052	9,879,011	11,902,438	9,219,153
Other.....	374,704	136,395	427,295	220,031	553,030	369,680
Sand and Gravel—						
For railway ballast.....	6,083,110	2,433,413	5,129,714	1,711,776	7,124,461	2,493,086
For concrete, roads, etc.....	73,899,831	35,652,959	83,941,517	40,245,390	102,177,661	51,832,543
For mine filling.....	4,405,652	1,345,235	5,249,860	1,467,341	2,947,289	848,259
Crushed gravel.....	17,218,028	12,420,391	20,419,198	14,208,036	24,069,518	17,123,468
Totals, Sand and Gravel.....	110,961,034	58,987,671	127,524,474	67,775,653	148,801,268	81,957,352
Stone—						
Building.....	134,718	5,071,852	137,664	5,103,812	139,473	4,929,535
Monumental and ornamental.....	18,424	1,483,344	14,889	1,152,288	15,019	1,159,881
Limestone for agriculture.....	364,296	935,020	426,041	1,031,621	476,506	1,232,874
Chemical Uses—						
Flux.....	1,177,128	1,500,407	1,546,288	1,824,847	1,667,251	2,093,475
Pulp and paper.....	461,981	1,384,391	450,329	1,376,294	433,840	1,260,158
Other.....	56,227	66,857	437,620	506,989	295,865	368,195
Rubble and riprap.....	10,469,944	6,975,942	2,116,646	2,628,355	1,338,988	1,383,843
Crushed.....	19,747,430	20,953,361	25,051,872	28,480,399	28,407,923	34,299,571
Totals, Stone¹.....	32,767,925	39,857,134	30,512,920	43,736,687	33,257,318	48,809,918

¹ Includes minor items not specified.

Section 5.—Industrial Statistics of the Mineral Industry

The scope of the annual statistics on mineral production published by the Dominion Bureau of Statistics includes a general review of the principal mineral industries such as the copper-gold, silver-lead-zinc, and nickel-copper industries as well as a section on metallurgical works. Additional data published at irregular intervals include such features as numbers of employees, wages and salaries paid and net value of shipments.

The figures for 'net value of shipments' of industries given in Tables 30 and 31 are, in each table, the settlements received for shipments by producers and the additional values obtained when the smelting of ores is completed in Canada, less the cost of materials, fuel, etc. The totals indicate more nearly the actual returns to the different industries than do the values for the minerals in Table 2 of this Chapter where, with respect to copper, lead, zinc and silver, values are computed by applying the average prices for the year in the principal metal markets to the total production from mines and smelters with no reduction for fuel, electricity and other supplies consumed in the production process.

Some imported ores and concentrates are treated in Canadian non-ferrous smelting and refining works, especially in the production of aluminum, where imported ore only is used, and of cobalt which is derived mainly from African ores. The net shipments of these plants include therefore the net value of the metals recovered from these imported ores and to this extent the net shipments shown in Tables 30 and 31 include products of other than Canadian origin.

30.—Summary Statistics of the Mineral Industry by Province 1955 and 1956

Year, Province or Territory	Plants or Mines	Em- ployees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies ¹	Net Value of Shipments ²
	No.	No.	\$	\$	\$
1955					
Newfoundland.....	963	4,273	14,768,356	23,381,931	43,810,350
Nova Scotia.....	435	11,895	35,221,162	14,990,225	53,220,581
New Brunswick.....	510	2,221	6,491,864	3,302,752	12,742,214
Quebec.....	4,366	36,068	135,625,841	475,756,481	411,667,591
Ontario.....	6,545	45,253	175,160,318	344,974,646	480,392,319
Manitoba.....	872	3,517	14,259,341	14,804,966	37,044,979
Saskatchewan.....	2,123	3,990	17,766,069	26,252,320	69,199,727
Alberta.....	7,235	9,540	34,371,452	18,908,459	320,395,543
British Columbia.....	979	15,029	59,481,061	139,225,129	140,742,540
Northwest Territories.....	49	1,028	5,133,979	2,877,902	21,943,403
Yukon Territory.....	39	822	4,316,258	3,752,708	9,154,913
Canada, 1955.....	24,115³	133,636	502,595,701	1,068,227,519	1,600,314,160
1956					
Newfoundland.....	972	5,032	19,058,143	28,841,084	52,661,275
Nova Scotia.....	645	11,897	34,753,648	14,459,171	52,334,682
New Brunswick.....	565	2,456	7,106,882	3,893,472	14,638,724
Quebec.....	4,290	36,976	143,450,586	541,567,689	456,301,953
Ontario.....	6,314	49,308	202,904,431	403,187,991	523,509,563
Manitoba.....	1,086	3,220	13,170,338	14,809,893	44,835,075
Saskatchewan.....	3,053	4,826	22,670,036	26,894,226	102,038,999
Alberta.....	8,813	10,089	42,098,665	22,106,762	400,305,131
British Columbia.....	1,078	16,864	70,494,703	167,070,027	164,568,929
Northwest Territories.....	81	1,111	5,679,522	3,845,286	18,244,965
Yukon Territory.....	35	781	4,600,700	4,982,862	8,297,575
Canada, 1956.....	26,937³	142,560	566,047,654	1,231,658,463	1,837,736,871

¹ Includes freight and smelter charges and cost of ores treated.
process supplies, fuel, electricity, freight and smelter charges.

² Gross value of shipments less cost of
³ One plant on the border between Manitoba
and Saskatchewan credited to both provinces.

A summary of the industrial statistics of the principal mineral industries operating in Canada in the years 1952 to 1956 is presented in Table 31.

31.—Summary Statistics of the Principal Mineral Industries 1952-56

Industry and Year	Plants or Mines	Em- ployees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies ¹	Net Value of Shipments ²
	No.	No.	\$	\$	\$
Metallics.....1952	636	79,946	285,647,255	728,351,641	643,848,728
.....1953	574	76,826	285,940,984	713,345,667	643,620,543
.....1954	715	77,647	297,792,840	734,303,351	744,264,529
.....1955	818	81,970	329,437,928	971,546,007	909,932,534
.....1956	909	88,352	373,086,515	1,120,053,717	1,020,228,528
Placer gold.....1952	39	361	1,638,672	518,778	2,662,952
.....1953	56	306	1,372,504	259,011	1,878,310
.....1954	62	351	1,619,460	476,627	2,575,038
.....1955	64	345	1,480,868	284,511	2,443,595
.....1956	64	250	1,378,166	567,522	2,026,790
Gold quartz.....1952	216	20,757	69,004,828	34,912,550	100,083,506
.....1953	173	18,751	60,920,362	30,973,120	91,408,605
.....1954	157	18,479	63,578,156	32,017,855	95,627,104
.....1955	136	18,032	63,961,744	33,094,300	101,382,077
.....1956	133	17,031	62,701,494	30,972,433	97,011,062
Copper-gold-silver.....1952	98	7,210	26,711,225	34,998,574	80,668,817
.....1953	84	7,476	27,582,448	31,970,373	68,881,908
.....1954	118	7,837	29,791,332	35,079,924	70,814,052
.....1955	186	9,025	36,391,460	45,729,136	99,540,486
.....1956	314	10,533	43,929,096	50,245,735	96,941,696
Silver-cobalt.....1952	19	696	2,161,894	1,213,660	3,556,975
.....1953	14	739	2,204,274	1,387,416	3,235,991
.....1954	15	808	2,614,266	1,191,243	4,103,256
.....1955	14	762	2,598,437	1,184,721	4,350,174
.....1956	15	694	2,415,545	1,061,309	3,502,093
Silver-lead-zinc.....1952	177	10,331	37,643,614	60,189,782	104,937,002
.....1953	143	7,144	28,695,473	55,904,834	67,898,350
.....1954	124	6,386	24,847,011	58,178,798	78,077,960
.....1955	103	6,529	26,741,770	57,523,638	82,663,039
.....1956	96	6,338	27,253,247	56,316,672	86,604,019
Nickel-copper.....1952	22	10,820	42,151,955	12,046,000	59,694,630
.....1953	32	11,511	47,596,673	16,199,809	64,973,869
.....1954	37	11,244	48,142,987	19,576,040	74,891,033
.....1955	38	10,953	48,670,802	20,573,009	75,454,036
.....1956	55	11,872	55,486,888	20,880,263	82,735,929
Iron ³.....1955	30	4,892	18,740,274	38,646,915	71,788,935
.....1956	40	6,469	29,249,650	60,755,398	99,606,720
Miscellaneous metals.....1952	47	5,163	18,370,772	14,119,614	25,523,464
.....1953	54	5,784	23,023,639	15,940,190	35,136,282
.....1954	180	6,494	24,603,658	17,241,822	66,138,130
.....1955	223	2,826	12,663,195	6,798,377	28,305,111
.....1956	169	4,377	20,532,485	13,712,560	40,781,866
Smelting and refining.....1952	18	24,608	87,964,295	570,352,683	266,721,382
.....1953	18	25,115	94,545,611	560,710,914	310,207,228
.....1954	22	26,048	102,595,970	570,541,042	352,037,956
.....1955	24	28,606	118,189,378	767,711,400	444,005,081
.....1956	23	30,788	130,139,944	885,546,825	511,018,353
Non-metallics (excluding Fuels).....1952	196	11,217	36,002,097	22,922,666	98,919,971
.....1953	210	11,099	36,891,610	23,208,288	96,771,684
.....1954	207	10,892	37,878,138	23,474,927	98,626,771
.....1955	243	11,722	42,390,871	27,496,572	112,871,820
.....1956	209	12,548	47,128,001	30,158,075	122,414,048

For footnotes, see end of table, p. 555.

31.—Summary Statistics of the Principal Mineral Industries 1952-56—continued

Industry and Year	Plants or Mines	Em- ployees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies ¹	Net Value of Shipments ²
	No.	No.	\$	\$	\$
Non-metallics (excluding Fuels)—concl.					
Asbestos.....1952	23	6,318	23,625,431	13,137,225	76,158,201
1953	24	6,482	24,567,463	14,088,699	71,990,225
1954	25	6,563	24,850,100	14,054,972	72,386,464
1955	30	6,729	28,116,049	16,297,401	83,378,250
1956	23	7,065	30,411,878	17,877,081	85,427,228
Feldspar, quartz and nepheline syenite..1952	34	426	1,251,943	660,344	3,044,081
1953	33	431	1,358,308	635,037	3,375,154
1954	29	377	1,193,766	554,188	3,107,993
1955	33	414	1,359,695	775,685	3,734,690
1956	30	502	1,792,484	759,489	5,258,255
Gypsum.....1952	14	1,061	2,979,091	2,361,683	4,176,391
1953	14	954	2,891,848	2,059,208	5,340,676
1954	14	932	2,929,829	2,166,490	4,929,289
1955	14	944	2,874,198	2,190,435	5,846,718
1956	15	1,030	3,317,673	2,357,526	4,902,710
Iron oxides.....1952	4	45	93,423	41,867	153,055
1953	4	37	83,095	42,843	152,958
1954	3	31	67,564	35,985	150,871
1955	4	33	71,781	44,156	121,772
1956	3	29	49,669	38,745	152,400
Mica.....1952	28	115	168,176	34,814	159,292
1953	44	105	152,284	26,351	134,777
1954	32	44	59,194	13,932	71,207
1955	33	31	42,495	11,648	66,727
1956	23	23	37,673	8,841	88,208
Peat.....1952	36	1,042	1,601,825	932,940	2,324,417
1953	36	955	1,579,715	984,997	2,447,096
1954	40	880	1,736,002	1,140,795	2,824,777
1955	39	1,180	2,109,166	1,350,085	3,301,326
1956	38	1,274	2,538,885	1,427,053	4,024,252
Salt.....1952	12	651	1,907,219	3,060,246	5,995,833
1953	12	676	1,957,318	2,826,033	5,579,756
1954	13	669	2,067,424	2,702,731	7,151,404
1955	13	691	2,347,080	3,299,285	8,569,792
1956	13	785	2,740,685	3,454,283	10,552,905
Talc and soapstone.....1952	3	54	117,144	74,194	228,924
1953	3	54	132,934	63,315	245,182
1954	4	53	134,437	100,754	288,294
1955	4	50	130,221	101,836	290,831
1956	4	67	169,120	113,533	315,802
Miscellaneous non-metal ⁴.....1952	42	1,535	4,257,845	2,619,353	6,679,777
1953	40	1,405	4,168,645	2,481,805	7,505,860
1954	47	1,343	4,839,822	2,705,080	7,716,472
1955	73	1,650	5,340,186	3,426,041	7,561,714
1956	60	1,773	6,069,934	4,121,524	11,692,288
Fuels.....1952	10,236	28,029	87,935,137	23,709,842	232,767,209
1953	11,435	26,766	83,854,923	23,951,642	290,107,746
1954	12,357	24,807	78,271,162	22,931,832	329,809,609
1955	14,329	23,458	76,343,685	24,921,036	388,519,230
1956	16,811	24,187	85,820,926	30,211,422	482,704,117

For footnotes, see end of table, p. 555.

31.—Summary Statistics of the Principal Mineral Industries 1952-56—concluded

Industry and Year	Plants or Mines	Em- ployees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies ¹	Net Value of Shipments ²
	No.	No.	\$	\$	\$
Fuels—concl.					
Coal.....1952	271	21,754	66,028,224	18,959,228	92,066,921
1953	241	19,847	59,350,290	18,146,436	84,575,439
1954	223	18,050	53,650,045	15,631,307	80,968,959
1955	203	16,590	50,325,387	15,368,193	78,211,278
1956	185	16,095	49,468,237	16,317,316	79,032,447
Natural gas.....1952	4,132	2,573	7,296,092	336,666	5,517,385
1953	3,688	2,769	8,073,532	337,277	6,519,224
1954	3,572	2,887	8,864,662	356,404	7,930,405
1955	3,659	2,849	9,070,036	478,580	8,715,539
1956	3,484	2,947	10,617,695	844,887	8,429,004
Petroleum.....1952	5,833	3,702	14,610,821	4,413,948	135,182,903
1953	7,506	4,150	16,430,201	5,467,929	199,013,083
1954	8,562	3,870	15,756,455	6,944,121	240,910,245
1955	10,467	4,019	16,948,262	9,074,263	301,592,413
1956	13,142	5,145	25,734,994	13,049,219	395,242,666
Structural Materials.....1952	8,889	14,894	43,391,662	35,466,899	136,918,411
1953	8,289	15,347	46,378,901	40,265,942	151,047,272
1954	8,625	16,099	51,363,733	41,692,754	167,197,827
1955	8,725	16,486	54,423,217	44,263,904	188,990,576
1956	9,008	17,473	60,012,212	51,230,249	212,390,178
Clay products.....1952	133	3,568	9,812,214	5,116,848	19,844,680
1953	125	3,719	10,833,628	5,642,817	24,134,914
1954	125	3,929	12,112,490	6,023,812	26,336,286
1955	118	4,118	12,850,485	6,174,226	30,178,957
1956	119	4,418	14,793,971	7,335,562	30,449,418
Cement.....1952	11	2,239	7,849,057	18,365,676	32,664,254
1953	11	2,391	8,873,694	21,799,652	40,428,272
1954	12	2,575	9,802,707	22,243,820	39,953,127
1955	12	2,801	10,962,895	24,475,775	44,336,891
1956	17	3,186	12,856,855	28,547,632	50,058,214
Lime.....1952	42	1,005	3,145,246	4,435,054	9,784,399
1953	42	1,057	3,278,434	4,608,887	10,600,220
1954	40	1,012	3,349,881	4,678,017	10,810,714
1955	39	1,099	3,776,481	4,783,461	11,793,430
1956	38	1,100	3,853,007	4,906,353	11,555,978
Sand and gravel.....1952	8,210	4,185	12,354,505	2,673,245	48,665,798
1953	7,623	4,377	13,253,953	3,526,252	49,959,149
1954	7,891	4,437	13,717,851	3,084,875	55,902,796
1955	7,999	4,360	14,442,413	3,358,947	64,416,106
1956	8,311	4,627	14,994,414	4,032,039	77,925,313
Stone.....1952	493	3,897	10,230,640	4,876,076	25,959,280
1953	488	3,803	10,139,192	4,688,334	25,924,717
1954	557	4,146	12,380,804	5,662,230	34,194,904
1955	557	4,108	12,390,943	5,471,495	38,265,192
1956	523	4,142	13,513,965	6,408,663	42,401,255
Grand Totals.....1952	19,957	134,116	452,976,151	810,451,048	1,112,454,319
1953	20,508	130,038	453,065,518	800,771,539	1,181,547,245
1954	21,904	129,445	465,305,873	822,402,864	1,339,596,736
1955	24,115	133,636	502,595,701	1,068,227,519	1,600,314,160
1956	26,937	142,560	566,047,654	1,231,658,463	1,837,736,871

¹ Includes freight and smelter charges and cost of ores treated.
process supplies, fuel, electricity, freight and smelter charges.
natural abrasives.

² Gross value of shipments less cost of
³ Available from 1955 only.

⁴ Includes

Section 6.—World Production of Certain Metallic Minerals and Fuels

Table 32 shows the production of certain metallic minerals and fuels in the different countries of the world for the year 1955. These figures are taken from the *United Nations Statistical Yearbook 1956* which presents production figures for 1936-55 for a much more extensive list of mining and quarrying industries. The 1955 figures are provisional and have been converted from kilograms to ounces troy for gold and from metric tons to short tons for the other metals and fuels shown.

32.—World Production of Certain Metallic Minerals and Fuels, 1955

NOTE.—Dashes are given in this table where no figures were shown in the *United Nations Statistical Yearbook* either because there was no production or because the quantity was not available.

Country	Gold	Silver	Copper	Iron	Lead	Zinc	Coal	Crude Petroleum
	'000 oz. t.	'000 oz. t.	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Algeria.....	—	—	—	2,061.3	11.2	34.2	332.9	63.2
Angola.....	—	—	3.2	—	—	—	—	—
Argentina.....	—	—	—	—	29.5	23.4	147.0	4,811.6
Australia.....	1,049.0	—	45.3	2,580.5	318.7	287.2	21,608.6	—
Austria.....	—	—	3.0	975.5	6.1	7.8	188.5	4,040.0
Bahrain.....	—	—	—	—	—	—	—	1,655.7
Bechuanaland.....	0.5	—	—	—	—	—	—	—
Belgian Congo.....	369.9 ¹	4,083.1	258.7 ²	—	0.1	74.7	529.1	—
Belgium.....	—	—	—	40.8	—	—	33,045.1	—
Bolivia.....	73.8 ³	5,915.7 ³	3.9 ³	—	21.1 ³	23.5 ³	—	386.9
Brazil.....	78.1	—	—	—	—	—	2,485.7	280.1
British Guiana.....	22.7	—	—	—	—	—	—	—
British West Africa.....	—	38.6 ^{3,4}	—	—	—	—	—	—
Brunei.....	—	—	—	—	—	—	—	5,722.1
Bulgaria.....	—	—	—	77.2	—	—	323.0	—
Burma.....	—	1,536.8	0.4	4.4	31.4	16.2	—	234.8
Cameroons, French.....	0.5	—	—	—	—	—	—	—
Canada.....	4,542.0	27,723.6	324.6	9,557.0 ⁵	194.0	426.9	12,524.5	19,187.9
Chile.....	122.9	1,713.6	477.9	1,541.0	3.7	3.1	2,544.1 ⁶	370.4
China (Taiwan only).....	28.1	—	—	—	—	—	2,600.4 ⁷	3.5
Colombia.....	380.8	112.5	—	—	—	—	2,039.3	6,055.0 ⁸
Cuba.....	—	—	19.3	20.9	—	—	—	3.5
Cyprus.....	—	—	29.5	—	—	—	—	—
Czechoslovakia.....	—	—	—	859.8	—	—	24,361.1	—
Ecuador.....	15.3	48.2	—	—	0.1	—	—	513.7
Egypt.....	—	—	—	—	—	—	—	2,007.3 ⁸
El Salvador.....	3.9 ³	—	—	—	—	—	—	—
Fiji.....	75.0	—	—	—	—	—	—	—
Finland.....	18.8	225.1	25.7	—	1.1	24.3	—	—
France.....	2.8	1,659.0	—	18,022.8	9.5	11.2	80,098.3 ⁹	975.5
French Equatorial Africa.....	46.6	—	—	—	3.6	—	—	—
French Guiana.....	8.7	—	—	—	—	—	—	—
French West Africa.....	0.2	—	—	362.7	—	—	—	—
Germany—	—	—	—	—	—	—	—	—
East Germany.....	—	—	—	—	—	—	3,196.7	—
West Germany.....	—	—	1.3	4,116.0	74.3	101.5	145,296.7	3,469.0
Gold Coast (now Ghana).....	687.2	10	—	—	—	—	—	—
Greece.....	—	77.2	—	104.7	5.5	9.9	—	—
Guatemala.....	—	—	—	—	7.0	10.2	—	—
Honduras.....	0.8 ³	1,958.0 ³	—	—	2.0	—	—	—
Hong Kong.....	—	—	—	58.4	—	—	—	—
Hungary.....	—	—	—	121.3	—	—	2,967.4	1,764.8
India.....	211.5	131.8	—	2,910.1	—	—	42,798.3	—
Indonesia.....	—	—	—	—	—	—	897.3	12,996.2
Iran.....	—	—	—	—	—	—	277.8	18,816.4
Iraq.....	—	—	—	—	—	—	—	37,194.2
Ireland.....	—	—	—	—	—	—	218.3	—
Italy.....	5.6	858.4	0.4	761.7	56.0	129.4	1,251.1	225.6
Japan.....	288.7	7,311.1	80.5	942.5	28.9	119.8	46,763.3	384.7
Kenya.....	12.3 ³	—	—	—	—	—	—	—
Korea (South).....	47.7	80.4	0.9	15.4	0.9	—	1,433.0	—
Kuwait.....	—	—	—	—	—	—	—	61,749.3
Liberia.....	—	—	—	1,282.0	—	—	—	—
Luxembourg.....	—	—	—	2,381.0	—	—	—	—
Madagascar.....	1.0	—	—	—	—	—	—	—
Malaya, Federation of.....	20.5	—	—	1,050.5	—	—	—	—
Mexico.....	382.9	47,968.9	60.3	472.9	232.4	297.0	1,479.3	14,099.7

For footnotes, see end of table, p. 557.

32.—World Production of Certain Metallic Minerals and Fuels, 1955—concluded

Country	Gold	Silver	Copper	Iron	Lead	Zinc	Coal	Crude Petroleum
	'000 oz. t.	'000 oz. t.	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Morocco—								
Former French Zone....	—	980.6	—	152.1	97.8	47.7	514.8	113.0
Former Spanish Zone....	—	—	—	696.7	0.7 ³	—	—	—
Mozambique.....	—	—	—	—	—	—	190.1	—
Netherlands.....	—	—	—	—	—	—	13,112.0	1,128.8
New Guinea (Netherlands)	—	—	—	—	—	—	—	522.5
New Zealand.....	26.4	28.9	—	1.4	—	—	877.4	0.9
Nicaragua.....	229.6 ³	—	—	—	—	—	—	—
Nigeria.....	0.7	10	—	—	—	—	838.9	—
Northern Rhodesia.....	—	—	383.3 ²	—	18.0 ²	31.2 ²	—	—
Norway.....	—	61.1	15.4	951.3 ¹¹	0.8	7.5	354.9	—
Pakistan.....	—	—	—	—	—	—	608.5 ⁶	304.2
Peru.....	163.5	19,583.0	48.2	1,124.4	122.9	166.7	126.8	2,523.2
Philippines.....	419.1	501.6	19.3	899.5	2.6	—	143.5	—
Poland.....	—	—	—	695.6 ¹²	—	—	104,141.9	198.4
Portugal.....	—	—	0.1	104.7	1.6	—	445.3	—
Portuguese India.....	—	—	—	877.4 ³	—	—	—	—
Qatar.....	—	—	—	—	—	—	—	5,994.4
Romania.....	—	—	—	297.6	12.2 ²	—	440.9	11,684.5
Sarawak.....	0.5	—	—	—	—	—	—	69.4
Saudi Arabia.....	—	—	—	—	—	—	—	51,854.9
Sierra Leone.....	—	10	—	895.1 ³	—	—	—	—
Southern Rhodesia.....	524.7	—	—	51.0	—	—	3,654.2	—
South West Africa.....	—	—	23.6	—	216.1	23.3	—	—
Spain.....	—	1,549.7	—	1,705.3	69.9	101.7	13,697.3	—
Sweden.....	—	—	17.3	11,521.4	35.5	64.8	310.9	—
Switzerland.....	—	—	—	71.6	—	—	—	—
Tanganyika.....	68.9 ³	—	—	—	4.4 ³	—	—	—
Thailand.....	—	—	—	—	5.8	—	—	—
Trinidad.....	—	—	—	—	—	—	—	3,927.5
Tunisia.....	—	83.6	—	672.4	29.3	6.0	—	—
Turkey.....	—	—	26.2 ²	607.4	2.9	2.5	6,058.3	196.9
Uganda.....	0.5 ³	—	—	—	—	—	—	—
Union of South Africa.....	14,602.3	1,472.5	47.4	1,391.1	0.6	—	35,396.3	41.0 ¹³
U.S.S.R.....	—	—	—	45,966.4	—	—	304,348.1	78,043.6
United Kingdom.....	—	—	—	5,072.8	6.8	3.2	248,193.0 ¹⁴	167.6
United States of America.....	1,876.8 ¹⁵	36,468.6 ¹⁵	998.6	59,524.8 ¹⁶	333.4	514.7	493,369.1	370,108.6
Venezuela.....	61.1	—	—	5,953.6	—	—	33.6	126,951.0
Vietnam.....	—	—	—	—	—	—	1,212.5	—
Yugoslavia.....	41.6	2,983.6	32.1	739.7	99.2	65.8	1,253.3	283.5

¹ Includes Ruanda-Urundi. ² Smelter production. ³ Exports. ⁴ Consists of Gold Coast (now Ghana), Nigeria and Sierra Leone. ⁵ Shipments. ⁶ Includes lignite. ⁷ Estimate for China (Mainland) 102,702,000 tons. ⁸ Includes natural gasoline. ⁹ Includes the Saar which became part of West Germany Jan. 1, 1957. ¹⁰ Included with British West Africa. ¹¹ Includes ferro-titanium. ¹² Includes content of iron pyrites. ¹³ Entirely shale oil. ¹⁴ Great Britain only. Excludes coal produced at quarries but includes open-cast coal. ¹⁵ Includes Alaska. ¹⁶ Excludes manganiferous iron ores.

CHAPTER XII.—POWER GENERATION AND UTILIZATION

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Section 1.—Water Power Resources and Their Development*

Canada, a land of many lakes and rivers, has been abundantly endowed by nature with great water power resources well distributed across the country. In most sections adequate precipitation and favourable topography result in numerous rivers on which falls and rapids frequently occur and which offer excellent opportunities for the development of hydraulic power; with the exception of the prairies of the middle west, water power resources of importance are found in virtually every part of the country. In British Columbia, where precipitation is high, the rivers flowing down the Pacific slope of the Rocky Mountains offer many fine power sites. Alberta, although a prairie province, also has mountain streams from the Rockies and great reserves of undeveloped power on its large northern rivers. The Canadian Shield of Precambrian rock, which forms an arc around Hudson Bay, covers a portion of the Northwest Territories and northern Saskatchewan as well as large parts of Manitoba, Ontario, Quebec and Labrador; it is a rough, forest covered, well watered area characterized by innumerable lakes and by rivers with many falls and rapids. The water power of the Great Lakes-St. Lawrence River System forms part of the vast resources of Ontario and Quebec upon which their status as the principal manufacturing provinces of Canada is dependent and which compensate in large degree for the lack of indigenous coal. In New Brunswick and Nova Scotia and on the Island of Newfoundland, precipitation is moderately heavy and the rivers, though not large, afford numerous possibilities for power developments of moderate size. In Labrador the potential resources of the Hamilton River are outstanding.

An accurate comparison of Canada's water power resources and their development with those of other countries is not possible because world statistics are incomplete and are tabulated on differing bases. However, from figures available at the end of 1953 it appears that Canada ranks second among the countries of the world in total installed capacity, being exceeded only by the United States; in installation per thousand population, Canada is exceeded only by Norway. Canada is in approximately fifth place in potential power resources but, on the whole, those resources are more readily available to prospective markets than are the water power resources of other countries that outrank Canada, an exception being the United States. In particular might be mentioned the enormous potential resources of the great river systems of Africa and Asia.

* Revised by the Water Resources Branch, Department of Northern Affairs and National Resources, Ottawa.

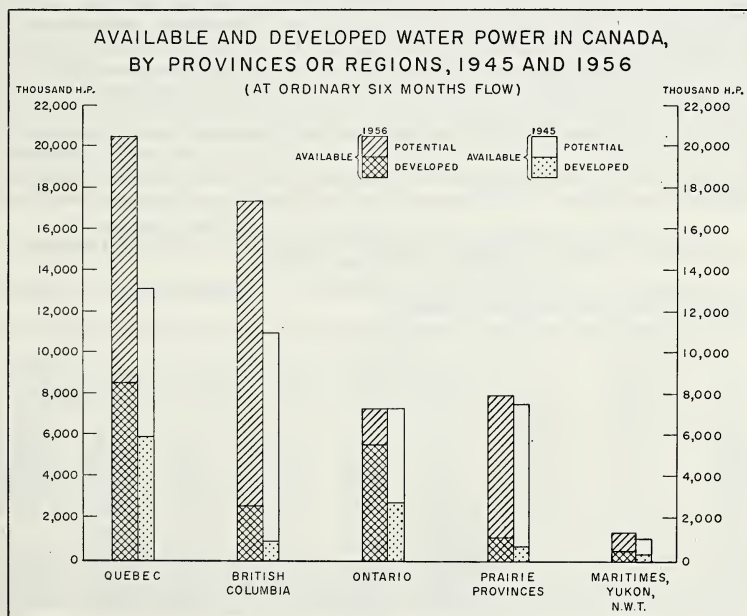
Subsection 1.—Available and Developed Water Power in Canada

Table 1 gives a summary of the water power resources of Canada and their development as at the end of 1956.

1.—Available and Developed Water Power by Province as at Dec. 31, 1956

Province or Territory	Available 24-Hour Power at 80 p.c. Efficiency		Turbine Installation ¹
	At Ordinary Minimum Flow	At Ordinary Six Months Flow	
	h.p.	h.p.	h.p.
Newfoundland.....	958,500	2,754,000	336,750
Prince Edward Island.....	500	3,000	1,882
Nova Scotia.....	25,500	156,000	179,718
New Brunswick.....	123,000	334,000	164,130
Quebec.....	10,896,000	20,445,000	8,489,957
Ontario.....	5,407,000	7,261,000	5,443,766
Manitoba.....	3,333,000	5,562,000	796,900
Saskatchewan.....	550,000	1,120,000	109,835
Alberta.....	508,000	1,258,000	285,010
British Columbia.....	10,200,000	17,300,000	2,514,960
Yukon and Northwest Territories.....	382,500	814,000	33,240
Canada.....	32,384,000	57,007,000	18,356,148

¹ Includes water wheels and hydraulic turbines installed.



The figures given in the first and second columns of Table 1 represent 24-hour power and are based upon rapids, falls and power sites of which the actual drop, or the head of possible concentration, has been measured or at least carefully estimated. Tabulations of potential power in Canada are not complete as many unrecorded rapids and falls of undetermined power capacity exist on rivers and streams throughout the country, particularly in the less explored northern districts. Apart from areas where definite studies have been carried out and the results recorded, no consideration has been given to the power concentrations that are feasible on rivers and streams of gradual gradient where economic heads possibly may be created by the construction of dams. Furthermore, the estimates of power available in different provinces do not include the power potential of major river diversions which have been investigated but not developed. Thus the figures in Table 1 of available power, under the two conditions of stream flow, represent only the minimum water power possibilities of Canada.

The third column of Table 1 gives the total capacity of the water wheels actually installed and should not be placed in direct comparison with those in the first and second columns to deduce the percentage of the available developed water power resources. At developed sites, the water wheel installation averages 30 p.c. greater than the corresponding calculated maximum available power at the same sites. Figures of the table therefore indicate that the *at present* recorded water power resources will permit of a turbine installation of about 74,000,000 h.p. and that the turbine installation at Dec. 31, 1956, represents less than 25 p.c. of recorded water power resources.

The consistent growth of hydraulic turbine capacity is shown in Table 2. The average annual increase from 1900 to 1905 of 56,000 h.p., was stepped up sharply in subsequent years because of improvements in the transmission of electricity and the building of large central electric stations. During the period 1906-22 development proceeded at the fairly uniform rate of 150,000 h.p. per annum but the rate of installation increased sharply in 1923 and continued at about 377,000 h.p. each year from 1923 to 1935. As an aftermath to the economic depression, the rate of installation was low during the years 1936-39 but increased to a high average of 481,000 h.p. per annum during the period 1940-43 to satisfy war requirements. Few developments were undertaken in the later war years or in the immediate postwar period so that only a small amount of new capacity came into operation in the 1944-47 period. However, the effects of the later postwar program of construction are apparent in the large growth in the years 1948-56 when the average rate was about 845,000 h.p. per annum. A continuation of this rate of growth is indicated for some years.

2.—Hydraulic Turbine Horsepower Installed by Province as at Dec. 31, Decennially 1900-50 and Annually 1951-56

NOTE.—Figures for each year 1900-30 are given in the 1939 Year Book, p. 362; for 1931-39 in the 1946 edition, p. 362; and for 1940-49 in the 1954 edition, pp. 556-557.

Year	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.
1900.....	—	1,521	19,810	4,601	82,864	53,876
1910.....	—	1,760	31,476	11,197	334,763	490,821
1920.....	—	2,233	37,623	21,976	955,090	1,057,422
1930.....	—	2,439	114,224	133,681	2,718,130	2,088,055
1940.....	—	2,617	139,217	133,347	4,320,943	2,597,595
1950.....	262,810	2,299	150,960	133,111	6,372,812	3,513,840
1951.....	279,160	2,299	150,960	132,911	6,755,351	3,718,505
1952.....	292,660	2,299	162,455	135,511	7,263,621	3,948,466
1953.....	311,150	1,900	162,433	164,130	7,719,122	4,006,686
1954.....	323,150	1,882	170,908	164,130	7,773,822	4,845,486
1955.....	329,150	1,882	177,018	164,130	7,975,657	5,367,866
1956.....	336,750	1,882	179,718	164,130	8,489,957	5,443,766

2.—Hydraulic Turbine Horsepower Installed by Province as at Dec. 31, Decennially 1900-50 and Annually 1951-56—concluded

Year	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.
1900.....	1,000	—	280	9,366	5	173,323
1910.....	38,800	30	655	64,474	3,195	977,171
1920.....	85,325	35	33,122	309,534	13,199	2,515,559
1930.....	311,925	42,035	70,532	630,792	13,199	6,125,012
1940.....	420,925	90,835	71,997	788,763	18,199	8,584,438
1950.....	595,200	111,835	107,225	1,284,208	28,450	12,562,750
1951.....	596,400	111,835	207,825	1,358,808	28,450	13,342,504
1952.....	716,900	111,835	207,825	1,432,858	31,450	14,305,880
1953.....	716,900	109,835	207,960	1,496,518	32,440	14,929,074
1954.....	756,900	109,835	258,710	2,246,868	32,440	16,684,131
1955.....	796,900	109,835	284,010	2,271,460	33,240	17,511,148
1956.....	796,900	109,835	285,010	2,514,960	33,240	18,356,148

The availability of large amounts of hydro-electric energy has greatly fostered the economical utilization of the natural products from land, forest and mine. Low-cost power is fundamental in meeting the enormous requirements of the pulp and paper industry—Canada's largest industry and one of the world's great industrial enterprises; it also allows economical mining, milling and refining of base and precious metals and facilitates their fabrication into a multitude of manufactured articles. Thus, Canada's outstanding industrial growth in the postwar period has been made in conjunction with accelerated development of water power resources. From hydro-electric plants ranging in capacity from a few hundred to more than 1,000,000 h.p., networks of transmission line carry power to most urban centres and to an increasing number of rural districts. This wide distribution of power has facilitated the decentralization of industry, enabling manufacturing processes to be carried on in many of the smaller centres of population. Economical domestic electrical service also contributes in no small measure to the high standard of living in Canada.

The total of 18,356,148 h.p. of installed capacity of water power plants in 1956 produced about 86,680,000,000 kwh. of energy. Assuming a working year of 275 eight-hour days and that the working capacity of a manual worker equals 1/10 h.p., the total energy produced from water power in 1956 represents the equivalent of the output of about 525,000,000 labourers.

Table 3 shows, under three classifications, the purposes for which the developed water power is primarily utilized.

3.—Developed Water Power by Province and Industry as at Dec. 31, 1956

Province or Territory	Turbine Installation			Total ⁴
	In Central Electric Stations ¹	In Pulp and Paper Mills ²	In Other Industries ³	
	h.p.	h.p.	h.p.	h.p.
Newfoundland.....	140,450	182,300	14,000	336,750
Prince Edward Island.....	369	—	1,513	1,882
Nova Scotia.....	164,705	10,337	4,676	179,718
New Brunswick.....	134,700	23,872	5,558	164,130
Quebec.....	8,084,153	350,344	55,460	8,489,957
Ontario.....	5,139,417	223,507	80,842	5,443,766
Manitoba.....	795,000	—	1,900	796,900
Saskatchewan.....	109,800	—	35	109,835
Alberta.....	282,950	—	2,060	285,010
British Columbia.....	1,163,340	141,270	1,210,350	2,514,960
Yukon and Northwest Territories.....	13,540	—	19,700	33,240
Canada.....	16,028,424	931,630	1,396,094	18,356,148
Percentages of total installation.....	87.3	5.1	7.6	100.0

¹ Includes only hydro-electric stations that develop power for sale.

² Includes only water power actually developed by pulp and paper companies.

³ Includes only water power actually developed by industries other than central electric stations and pulp and paper companies.

⁴ Includes water wheels and hydraulic turbines installed.

Central electric station classification totalling 16,028,424 h.p. represents 87 p.c. of the total developed water power as at Dec. 31, 1956. Central hydro-electric stations produced 96 p.c. of all electricity sold in or exported from Canada during the year. The pulp and paper turbine installation total of 931,630 h.p. includes only water power actually developed and directly used by pulp and paper companies. In addition, this industry is the greatest purchaser of central electric station power, buying nearly 15 p.c. of all power sold for industrial purposes in 1956. Part of the purchased power is classed as secondary, being used for steam generation by electric boilers.

The 'other industries' group developed 1,396,094 h.p. solely for its own use. These diversified industries also provide a broad market for the power sold by the central electric stations, as the amount of power produced by these industries represents only a part of the power they use.

The figure of total hydraulic installation in Canada (18,356,148 h.p.) is the cumulative total of all existing installations of water wheels and hydraulic turbines irrespective of whether or not the equipment has been in use during the year. It has been adjusted to Dec. 31, 1956, by the inclusion of new installations completed during the year and by deletion of those old units which were dismantled.

Subsection 2.—Water Power Developments in the Provinces and Territories, 1955 and 1956

During 1955 and 1956, the appreciable amounts of 827,000 h.p. and 845,000 h.p., respectively, of new hydro-electric capacity were installed in Canada. Although considerably lower than the record amount of 1,758,000 h.p. which was brought into service during 1954, these quantities represent closely the average annual rate of development since 1947. Construction of hydro-electric plants was accelerating during 1956 with about 3,500,000 h.p. of new capacity expected to come into operation during 1957 and 1958 and an additional 4,500,000 h.p. under preliminary construction or planning for later years. Construction was active also in the field of power distribution and in the building of thermal-electric plants. Progress in each province and in Yukon Territory, pertaining principally to hydro-electric developments, but also covering thermal developments, is outlined below.

Atlantic Provinces.—In *Newfoundland* during 1955 the Union Electric Light and Power Company Limited completed the installation of a 2,000-h.p. turbine on the Trinity River near Trinity with the addition of a second similar unit under active prospect. The Company extended transmission facilities by completing 81 miles of 46-kv. line in 1955 and 1956; construction of 20 miles of 13.8-kv. line was started. By a replacement of the turbine runners, the Anglo-Newfoundland Development Company Limited increased from 60,000 h.p. to 64,000 h.p. the capacity of its plant at Grand Falls on the Exploits River. The United Towns Electric Company Limited completed, in December 1956, the installation of a single 5,600-h.p. unit on New Chelsea Brook at New Chelsea. Extensions to its transmission lines included the completion of 33 miles of 66-kv. line and 31 miles of 13.8-kv. line during 1955 and 1956. The Newfoundland Light and Power Company Limited has under active prospect the construction of two plants on Rattling Brook near Norris Arm, the first to develop an estimated 13,000 h.p. and the second about 31,000 h.p. On the Corner Brook River at Corner Brook, the Bowater Power Company Limited is constructing a development of 12,000 h.p. in two units for operation in 1957. The Maritime Mining Corporation expects to complete, early in 1957, a 500-h.p. plant on Venams Brook at Green Bay and, at a later date, an 850-h.p. plant at Snooks Arm, Green Bay.

In the field of thermal plant construction, the Newfoundland Light and Power Company completed, in 1956, the installation of the initial unit of 10,000 kw. in its St. John's steam plant with a second unit of 20,000 kw. under active prospect for operation in 1959; the Bowater Power Company Limited completed the construction of a 6,600-kw. steam plant in one unit at Corner Brook for use as a stand-by.

In *Nova Scotia*, the 1955 activity of the Nova Scotia Power Commission brought about the completion of a 6,240-h.p. development on the Mersey River at Lower Great Brook, comprising two 3,120-h.p. units. A second project, scheduled for completion in 1957, involves a single 5,300-h.p. turbine on the Bear River at Bear River and investigations are proceeding on the proposed Wreck Cove development on Cape Breton Island. During 1955 and 1956, the Commission extended transmission lines by 103 miles of main line, mostly of 69-kv. capacity, and 100 miles of rural distribution line, with 120 miles of transmission lines of various capacities under active construction at the end of 1956. The Nova Scotia Light and Power Company has under active prospect the replacement of two units of 1,150 h.p. each by a single 5,000-h.p. unit at its Hemlock Falls plant on the Avon River, with change-over expected in 1958. Also under study is the development of an estimated 4,000 h.p. on the Nictaux River at Alpena. New transmission line construction included 67 miles of 69-kv. line and 17 miles of 23-kv. line.

In 1955 at Trenton in Pictou County, the Nova Scotia Power Commission increased to 40,000 kw. the capacity of its steam plant by the addition of a 20,000-kw. unit; a fourth similar unit is to be added in 1959. The Nova Scotia Light and Power Company Limited completed a fifth unit of 27,500 kw. at its Halifax steam plant; construction is progressing towards the completion of a 45,000-kw. unit in 1957 and another in 1959. At Glace Bay the Seaboard Power Corporation Limited installed a new steam unit of 18,750 kw. in 1955, with another scheduled for operation in 1958.

In *New Brunswick*, the construction of the Beechwood development on the St. John River by the New Brunswick Electric Power Commission was continued with two 45,000-h.p. units scheduled for completion in 1957 and with provision for a third similar unit. At other potential sites, investigations were under way during 1956 on the St. John, Tobique and Napisquit Rivers and on the Passamaquoddy Bay tidal project. The Commission completed 200 miles of 69-kv. transmission line and 245 miles of rural distribution line in 1955 and 1956. At the end of 1956, 147 miles of 138-kv. main line were under construction.

In 1955, Edmundston installed an additional diesel unit of 3,000 kw. to its thermal station and in 1956 the New Brunswick Electric Power Commission added a new unit of 22,500 kw. to its steam plant in Chatham.

Quebec.—During 1955 and 1956 new hydro-electric capacities amounting to 240,000 h.p. and 514,300 h.p., respectively, were brought into operation in Quebec. The addition for 1956 represented 61 p.c. of Canada's total development for that year.

The most notable progress was made by the Quebec Hydro-Electric Commission which placed in operation at its Bersimis No. 1 plant at Lac Casse during 1956 and 1957 three 150,000-h.p. units. Three similar units are scheduled for operation in 1959 and two others in 1960. At the Bersimis No. 2 site, preliminary construction was continued toward an ultimate installation of 855,000 h.p. in five 171,000-h.p. units. At the Beauharnois development on the St. Lawrence River dredging of the intake canal was continued and preliminary construction started on the third and final section of the powerhouse where five new 67,000-h.p. units are scheduled for operation in 1959 and one in 1960. The ultimate capacity of the whole development is expected to reach 2,235,000 h.p. At the Commission's Rapid II plant on the upper Ottawa River the third 16,000-h.p. unit was completed in 1956, and provision made for a fourth unit. Work was well advanced on the construction of a storage dam at the outlet of Lake Ste. Anne, on a tributary of the Manicouagan River, to allow a higher firm output from the plant of the Manicouagan Power Company where additional capacity is being installed. Studies and surveys are also being carried out by the Commission towards the development of the Lachine Rapids on the St. Lawrence River. In the transmission field, 146 miles of 154-kv. line were completed in 1955 to serve the Chibougamau district; in 1956, a double-circuit 450-mile 300-kv. line from Labrieville to Quebec and Montreal was completed and work was begun on three additional 300-kv. lines—Labrieville to Quebec City, Labrieville to Hauterive and a tie between the Bersimis plants Nos. 1 and 2.

During 1955, the Shawinigan Water and Power Company brought into operation a total of 158,500 h.p. by installing a new unit in each of three plants on the St. Maurice River comprising 44,500 h.p. at Rapid Blanc, 65,000 h.p. at La Trenché and 49,000 h.p. at La Tuque. In addition, construction was started in 1956 on a new plant on the St. Maurice River at Rapid Beaumont to develop 333,000 h.p. in six units, with initial operation scheduled for 1959 and completion in 1960. During 1955 and 1956 the Company extended its transmission line network by completing 160 miles of line at 220 kv., 79 miles at 110 kv. and 22 miles at 60 kv.

The Gatineau Power Company completed the installation of a 47,000-h.p. generating unit at Pagan Falls on the Gatineau River during 1955 and extended rural transmission services by 82 miles in 1955 and 68 miles in 1956.

The Northern Quebec Power Company Limited completed in 1955 the installation of an additional 34,500-h.p. unit in its Quinze Rapids plant on the upper Ottawa River, bringing the total capacity to 119,000 h.p. Extension to the McCormick development of the Manicouagan Power Company at First Falls on the Manicouagan River will add 180,000 h.p. in three units, the first scheduled for operation in 1957 and the other two in 1958. In 1956 the Aluminum Company of Canada began the construction of a hydro-electric development on the Peribonca River at Chute des Passes to comprise five 200,000-h.p. units. The turbine, which will be the largest in Canada, will receive water from the Passe Dangereuse reservoir by means of a seven-mile tunnel. Operation will be started in 1959 and development completed in 1960. In 1956, Price Brothers Company Limited commenced a 78,000-h.p. single-unit development on the Shipshaw River below Wilson Falls for operation in 1957 which will replace the existing 10,100-h.p. plant at Murdock Falls.

The Eastern Smelting and Refining Company Limited is constructing, on the Chicoutimi River, a development of 42,000 h.p. in one unit scheduled for operation in 1957. In 1956, the town of Parent, Chapleau County, completed the installation of a 1,300-h.p. unit at its Bazin River plant with provision for a second similar unit. The James MacLaren Company plans initial construction in 1957 of a new development on the Lièvre River at Dufferin Falls, to comprise 50,000 h.p. in two 25,000-h.p. units, for operation in December 1958.

Ontario.—The Hydro-Electric Power Commission of Ontario continued the rapid expansion of generating capacity in several major projects during 1955 and 1956. In the Sir Adam Beck-Niagara Generating Station No. 2, five 105,000-h.p. units were added during 1955, raising the total capacity to 1,260,000 h.p. Four additional units were under construction during 1956, one scheduled for operation late in 1957 and three in 1958. The eventual capacity of No. 2 development will be 1,680,000 h.p. Six reversible pump-turbines are being installed at the pumped storage generating station associated with the development. Water will be pumped from the power canal into a 700-acre reservoir with a usable capacity of 16,000 acre-feet. When acting as turbines, using water returning from the reservoir to the canal, each unit will have a capacity of 47,000 h.p. From early 1957 the units are expected to be completed at intervals of about two months.

The Commission continued construction of the control dam which forms part of the Niagara River remedial works being carried out jointly by Canada and the United States. The dam, which is located upstream from the Cascades, will extend 1,550 feet from the Canadian shore and will consist of 13 individually operated bascule-type gates mounted on concrete piers. At the end of 1956 nine gates were in operation.

Rapid progress was made on the St. Lawrence River Power Project, the Canadian portion of which is being constructed by the Commission. By the end of 1956 the foundation for the powerhouse structure at the foot of Barnhart Island was completed and concrete was being placed for the draft-tubes of the first six units. A diversion of the Cornwall canal near the powerhouse site was effected for service at the start of navigation in 1957. The relocation of the village of Iroquois was almost finished; about 220 houses were moved during 1956 from areas to be flooded. Thirty-five miles of relocated highway were

virtually completed as well as the laying of about 40 miles of double railway track. Channel excavation in the vicinity of Chimney Island and Galop Island was under way and excavation for the canal at Iroquois Point started. The Canadian portion of the powerhouse will contain 16 units totalling 1,200,000 h.p. capacity; the first units will be in operation in 1958 and the project completed in 1960.

Progress was made by the Commission on the construction of new hydro-electric plants in northwestern Ontario to meet growing demand for power by mining and pulp and paper companies. On the English River at Manitou Falls, the installation of four 18,500-h.p. units was completed in 1956, with provision for a fifth unit in 1958. On the Winnipeg River at Whitedog Falls, construction was begun in 1955 for the development of 81,000 h.p. scheduled for completion in 1958. At Caribou Falls, located on the English River near its junction with the Winnipeg River, construction began in 1956 on three units totalling 102,000 h.p. to be completed in 1958. A 19,000-h.p. unit will be added to the Alexander Falls plant on the Nipigon River and one of 25,000 h.p. at Cameron Falls. To increase the output of stations on the English River, and incidentally those on the Winnipeg River in Manitoba, the Commission is completing a scheme of diverting water from the Albany River at Lake St. Joseph *via* the Root River into Lac Seul. This work is being planned in close liaison with the Manitoba Hydro-Electric Board.

In addition to hydro-electric development, the Commission, with the co-operation of Atomic Energy of Canada Limited and Canadian General Electric Company Limited, is proceeding with the construction of a 20,000-kw. nuclear-power experimental plant for operation in 1959 at a site near its Des Joachims generating station on the Ottawa River. At its Richard L. Hearn steam plant in Toronto, the addition of a 200,000-kw. unit has been authorized for operation in 1958 with three similar units to be added in 1959, 1960 and 1961, respectively, to raise the total capacity to 1,200,000 kw.

Extensions to the Commission's transmission facilities in 1955 and 1956 included 58 circuit miles at 230 kv., 516 circuit miles at 115 kv., 204 circuit miles at 13-44 kv., and 1,954 circuit miles of rural distribution line.

Apart from activities of the Commission, the Ontario-Minnesota Pulp and Paper Company Limited modernized its Rainy River plant by dismantling one unit and increasing the capacity of each of the remaining eight units to 2,000 h.p. by runner replacement. This resulted in a capacity increase of 650 h.p. The Great Lakes Power Company is installing in its Upper Falls plant on the Montreal River for operation in 1957 a new unit comprising a 30,000-h.p. turbine driving a 25,000-kv. generator. The dam for this development was raised by 33 feet and the resulting increase in head increased the combined capacity of the two existing units from 23,400 h.p. to 25,300 h.p. Construction of a new plant on the Montreal River at Centre Falls is expected to be under way in 1957 with one 28,000-h.p. unit scheduled for completion in 1958. The Gananoque Electric Light and Water Supply Company is installing in its Jones Falls plant on the Rideau River an additional 1,500-h.p. unit to be completed in 1957.

Prairie Provinces.—In *Manitoba* during 1955, the Manitoba Hydro-Electric Board installed the last four units of 10,000 h.p. each in its McArthur Falls plant on the Winnipeg River bringing to completion the development of the resources of that river. On the Saskatchewan River near Lake Winnipeg, preliminary surveys and ground tests for the Grand Rapids project were completed in 1955 for the development of up to 460,000 h.p. at peak load. However, further investigations at this site have been tentatively discontinued in favour of the proposed Grand Rapids development on the Nelson River where construction is expected to begin in 1957 on four or five 37,500-h.p. units, with provision for additional units when required. Sherritt Gordon Mines, Limited is constructing, for operation in 1957, a second unit of 7,000 h.p. on the Laurie River.

In addition to hydro-electric activities, the Manitoba Hydro-Electric Board continued with the construction of a steam generating station at Brandon where four 30,000-kw. generators will be installed, two for operation in 1957 and two in 1958. The Board also plans to construct a steam plant at East Selkirk with an initial installation of two 66,000-kw. units; completion is scheduled for late 1959.

In the field of electrical distribution, The Manitoba Power Commission, which is the sole distributor of power in the Province outside of the city of Winnipeg, extended its transmission network during 1955 and 1956 by 336 circuit miles of main line and 513 miles of rural line. The inter-connection of the electrical systems of southern Manitoba and northwestern Ontario was effected in 1956 to permit the transfer of power between the two systems.

In *Saskatchewan*, the Churchill River Power Company is considering the extension of its Island Falls hydro-electric plant on the Churchill River by the addition of a 19,000-h.p. turbine to act as a stand-by unit. The Saskatchewan Power Corporation, whose transmission network covers a large part of the southern portion of the Province depends exclusively on thermal engines for power production. In 1955 a new station, consisting of two gas-engine generating units at 3,000 kw. each, was built at Kindersley to replace the steam plant at Battleford; a similar unit added in 1956 brought the total plant capacity to 9,000 kw. At the Corporation's Swift Current plant, a gas-engine generating unit of 3,000 kw. was installed in 1955 and a 6,000-kw. unit in 1956; an additional 3,000-kw. unit will be installed in 1957. At the Saskatoon steam plant, a 33,000-kw. unit was added in 1956 and a 30,000-kw. unit will be added to the Estevan plant in 1957. Main transmission line extensions included the completion of 516 miles of line in 1955 and 1956 and service was extended to an additional 16,000 farms.

In *Alberta*, Calgary Power Limited continued the expansion of several of its hydro-electric developments in the Bow River basin during 1955 and 1956. Additional units were installed in existing plants including an 18,400-h.p. turbine driving a 15,000 kva. generator at the Pocatererra plant and a 6,900-h.p. turbine at the Interlake plant. The installation of an additional 23,000-h.p. unit at the Cascades plant neared completion and investigations continued towards doubling the combined capacity of 85,000 h.p. at the Spray and Rundle plants. Possible developments on the Brazeau River and on the North Saskatchewan River received preliminary investigation. In the field of thermal development, the Company completed the installation of the initial 66,000-kw. steam turbine at its Wabamun plant, a second similar unit to be added for operation in 1958 and a third unit of 150,000 kw. for operation in 1960. Extension to the Company's transmission facilities included 176 circuit miles of 132-kv. line, 65 circuit miles at 66 kv. and, 532 circuit miles at 22 kv.

Northland Utilities Limited completed in 1955 the installation of a Kaplan turbine of 1,000 h.p. to increase the capacity of its Astoria River plant near Jasper to 1,800 h.p. A 3,000-kw. unit is to be added in 1957 to its Fairview steam turbine plant which is operated jointly with Canadian Utilities Limited. In 1955, Canadian Utilities Limited installed a new 2,500-kw. gas engine in its Grand Prairie plant and an additional 500-kw. diesel unit at Fort St. John. Elsewhere, the Company completed in 1956 the construction of an initial unit of 30,000 kw. in its new Forestburg plant and has in active prospect the addition of a 32,000-kw. thermal unit for 1961 operation in its Battle River plant. The Company increased its transmission facilities in 1955 by 30 miles of 138-kv. line, 70 miles of 69-kv. line, 62 miles of 23-kv. line, and 1,220 miles of rural distribution line. Extensions during 1956 included 10 miles of 6.9-12-kv. line, 78 miles of 22-kv. line, 53 miles of 66-kv. line and 48 miles of 138-kv. line. A number of cities in Alberta are expanding their thermal plant facilities. Medicine Hat is planning the addition of a steam generating unit of 10,000 or 20,000 kw. for 1959 operation, Lethbridge is adding a 10,000-kw. gas turbine for 1957 operation and Edmonton is planning the addition of two 30,000-kw. gas turbines for operation in 1957 and 1958.

British Columbia.—The British Columbia Power Commission was very active in hydro-electric development particularly on Vancouver Island. During 1955, the re-development of the Puntledge River near Courtney was completed with the installation

of a 35,000-h.p. turbine. A 5,500-h.p. development on the Spillimacheen River was completed, including two reconditioned 1,250-h.p. units and a new 3,000-h.p. unit. At Ladore Falls on the Campbell River, the first of two 35,000-h.p. units was installed, with the second scheduled for 1957. Also under construction was an initial unit of 42,000 h.p. at the outlet of Upper Campbell Lake to be completed in 1957 with provision for two similar units at a later date. On the mainland, the Commission continued the installation at the Whatshan River plant, of a third unit comprising a 16,500-h.p. reaction-type turbine scheduled for operation in 1957. In 1956, construction started on the Ash River near Alberni where the development of 35,000 h.p. under a head of 735 feet is to be completed in the winter of 1958-59. In the field of thermal development, the Commission in 1955 increased the capacity of its diesel plants at Vanderhoof and Dawson Creek by 1,000 kw. each, and early in 1957 new gas diesel generating units are expected to be in operation at Prince George, Quesnel and Dawson Creek raising the capacities of these plants to 16,270 h.p., 12,060 h.p. and 14,700 h.p. respectively. A 100,000-h.p. gas turbine generating station presently under way at Chemainus and scheduled for operation late in 1957 will comprise initially two 19,750-kw. units and subsequently two regenerative-cycle, two-shaft turbo-generator units at 18,000 kw. each. In 1955 and 1956 the Commission completed a 33-kv. transmission line from Spillimacheen to Golden, a double-circuit 138-kv. line from Ladore Falls to the John Hart station, and a 60-kv. line between Kamloops and Savona.

The British Columbia Electric Company made active progress towards the development of an additional 408,500 h.p. at its Bridge River power plant system. Part of this capacity was brought into operation in 1956 with the completion of 58,500 h.p. in one unit at the Seton Creek plant near Lillooet. At the La Joie dam, construction was under way with one 30,000-h.p. unit scheduled for completion in the autumn of 1957. Work started on the Bridge River No. 2 development to comprise four 80,000-h.p. units, three scheduled for operation in 1959 and one for 1960. Work proceeded on the Cheakamus development of 190,000 h.p. in two units, scheduled for service in late 1957. At the 4,000-h.p. development at Clowhom Falls—which, with the Sechelt peninsular system, was purchased from the British Columbia Power Commission in May 1956—work is under way for the replacement of the present plant by a single 40,000-h.p. unit for operation in the autumn of 1957. This project will include a new dam to give a maximum head of 174 feet and to provide a larger storage reservoir. A gas turbine plant capable of operating on either oil or natural gas will be added to the system in 1958; it will comprise four 33,500-h.p. turbines, each driving a 30,000-kva. generator. Expansion of the Company's transmission lines included the completion of 25 miles of overhead line and 19.6 miles of submarine cable which together form a 132-kv. connection between Vancouver Island and the mainland. The erection of a 97-mile, 132-kv. line was completed in 1956 to supply the Powell River and Sechelt areas; part of this line forms one of the longest overhead crossings in existence where it spans Jervis Inlet for a total distance of 10,100 feet. The Company is proceeding with a second transmission line at 345 kv. between Bridge River and Vancouver to be completed in 1957.

The Aluminum Company of Canada installed a fourth 150,000-h.p. unit in its Kemano plant during 1956; a fifth similar unit will be ready for operation in mid-1957 and another in prospect for operation late in 1958 will bring the capacity of the plant to 900,000 h.p.

The Powell River Company Limited, by diverting water from the upper Theodosia River into Powell Lake, increased the firm output of its plant by about 2,000 kw. The Northern British Columbia Power Company rebuilt its Shawatlangs plant comprising a single unit of 2,140 h.p. Northwest Power Industries Limited continued with surveys on the Nass River.

Yukon Territory.—In 1955, the Yukon Hydro Company Limited completed a new development on McIntyre Creek near Whitehorse comprising an 800-h.p. turbine driving a 750-kw. generator. The Northern Canada Power Commission started work in October 1956 on its development at Whitehorse Rapids on the Yukon River, about 1.5 miles upstream from Whitehorse. Two 7,500-h.p. units will be completed in October 1958, and a third provided for. The Commission is also adding a 3,000-h.p. unit to its Mayo River plant which will increase capacity at this site to 6,000 h.p.

Northwest Power Industries Limited has all but completed surveys on the proposed Yukon-Atlin-Taku project, which entails an initial 880,000-h.p. development at powerhouse No. 1 and a possible eventual development of nearly 5,000,000 h.p.

Section 2.—The Central Electric Station Industry

Central electric stations are companies, municipalities or individuals selling or distributing electric energy whether generated by themselves or purchased for resale. Stations are divided into two classes according to ownership, viz.: (1) private—those privately owned and operated by companies or individuals, and (2) public—those owned and operated by municipalities or governments.

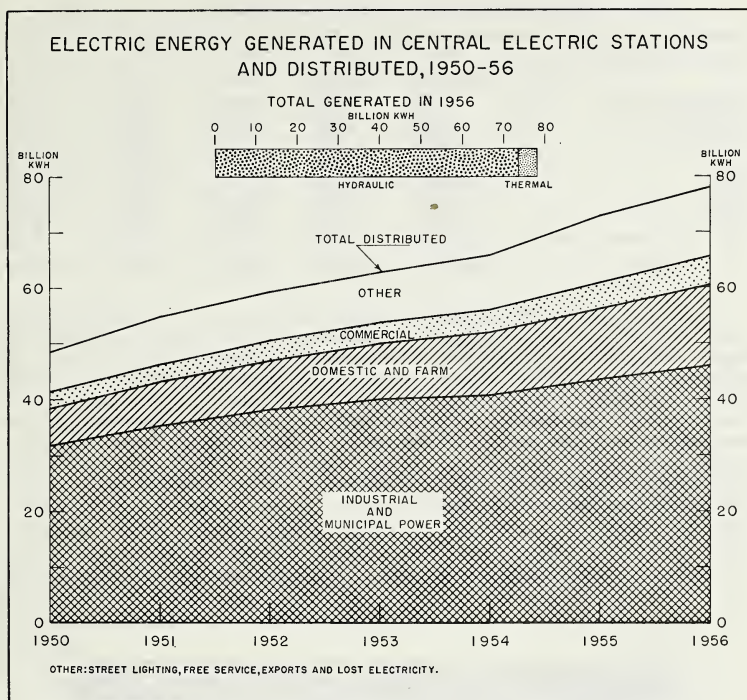
4.—Electric Energy Generated by Type of Station 1940-55 and by Province 1954 and 1955

Year, Province or Territory	Generated by—		Total	Year, Province or Territory	Generated by—		Total
	Water Power	Thermal Power			Water Power	Thermal Power	
	'000 kwh.	'000 kwh.	'000 kwh.		'000 kwh.	'000 kwh.	'000 kwh.
1940.....	29,524,248	585,035	30,109,283	1948.....	41,070,095	1,319,586	42,389,681
1941.....	32,628,930	688,733	33,317,663	1949.....	42,779,199	1,639,374	44,418,573
1942.....	36,582,953	772,226	37,355,179	1950.....	46,624,218	1,869,500	48,493,718
1943.....	39,660,312	819,281	40,479,593	1951.....	52,955,002	1,896,842	54,851,844
1944.....	39,553,352	1,045,427	40,598,779	1952.....	57,023,530	2,385,668	59,409,198
1945.....	39,131,020	999,034	40,130,054	1953.....	58,926,462	3,934,465	62,860,927
1946.....	40,692,395	1,044,592	41,736,987	1954.....	62,572,316	3,364,124	65,936,440
1947.....	42,273,167	1,151,632	43,424,799	1955.....	69,478,003	3,432,589	72,910,592
1954				1955			
Nfld.....	274,213	5,564	279,777	Nfld.....	704,797	6,658	711,455
P.E.I.....	645	41,869	42,514	P.E.I.....	545	45,885	46,430
N.S.....	528,491	592,017	1,120,508	N.S.....	500,859	704,545	1,205,404
N.B.....	664,135	235,840	899,975	N.B.....	517,098	355,758	872,856
Que.....	34,080,730	17,504	34,098,234	Que.....	35,330,565	29,571	35,360,136
Ont.....	19,162,186	980,546	20,142,732	Ont.....	23,914,057	436,053	24,350,110
Man.....	3,004,268	6,455	3,010,723	Man.....	3,089,880	4,056	3,103,936
Sask.....	559,300	732,979	1,292,279	Sask.....	569,401	912,420	1,481,821
Alta.....	857,150	641,335	1,498,485	Alta.....	935,943	793,011	1,728,954
B.C.....	3,377,787	108,123	3,485,910	B.C.....	3,835,417	141,373	3,976,790
Yukon and N.W.T.....	63,411	1,892	65,303	Yukon and N.W.T.....	69,441	3,259	72,700
Canada, 1954....	62,572,316	3,364,124	65,936,440	Canada, 1955....	69,478,003	3,432,589	72,910,592

Subsection 1.—Statistics of Central Electric Stations*

The growth of the central electric station industry has been practically continuous since 1919 when statistics of kilowatt hours generated were first made available. Horsepower installed increased almost continuously even during the depression years mainly because large power projects planned before the depression were in process of construction. Expansion since the end of the War has been spectacular and continuing; installed capacity of the industry in hydro and thermal units is now well over one horsepower for every Canadian.

* Revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics.



5.—Summary Statistics of Central Electric Stations 1946-55

Year	Generating Power Plants	Revenue from Sale of Power ¹	Power Equip- ment	Kilowatt Hours Generated	Customers	Persons Em- ployed	Salaries and Wages
	No.	\$'000	h.p.	'000	No.	No.	\$
1946.....	600	226,096	10,001,712	41,736,987	2,476,830	24,577	46,422,998
1947.....	607	243,706	9,786,087	43,424,799	2,643,327	26,704	54,120,717
1948.....	635	257,377	10,219,596	42,389,681	2,822,027	29,349	61,974,958
1949 ²	650	280,312	10,883,276	44,418,573	3,076,369	31,746	70,551,730
1950.....	665	323,833	11,976,241	48,493,718	3,269,824	46,193	71,773,595
1951.....	647	374,643	13,030,592	54,851,844	3,439,750	47,467	89,130,327
1952.....	562	415,494	14,221,806	59,409,198	3,620,595	47,238	102,165,917
1953.....	524	469,047	15,661,037	62,860,927	3,817,455	48,169	115,652,039
1954.....	..	505,526	16,721,816	65,936,440	4,001,626	33,762 ³	120,322,349
1955.....	..	548,657 ⁴	17,985,620	72,910,592	4,224,901 ⁵	35,178 ³	128,370,092

¹ Excludes duplication.² Newfoundland included from 1949.³ Excludes employees engaged on

new construction. ⁴ Not comparable with previous years; figure excludes revenue from exports to U.S.A. and includes revenue from interprovincial transfers. The total comparable with other years is \$560,383,000. ⁵ Not comparable with previous years; only ultimate customers now included. Including customers who purchased for resale, the total is 4,225,558.

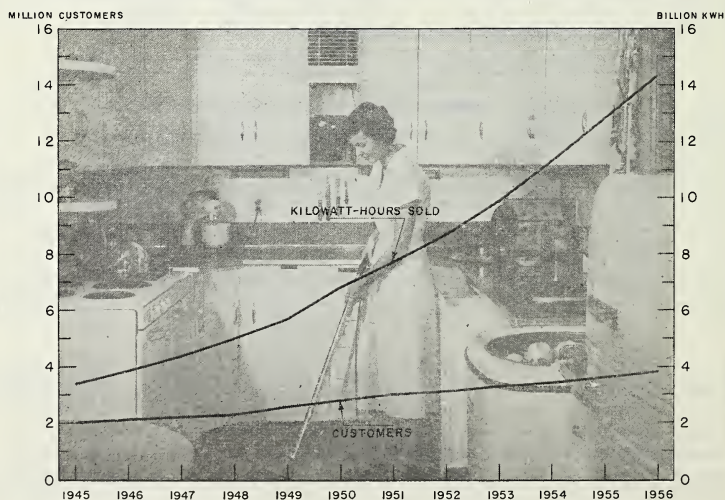
6.—Electric Energy Generated in Central Electric Stations by Province 1951-55

Province or Territory	1951	1952	1953	1954	1955
	'000 kwh.	'000 kwh.	'000 kwh.	'000 kwh.	'000 kwh.
Newfoundland.....	172,436	233,291	251,427	279,777	711,455
Prince Edward Island.....	32,768	35,879	39,439	42,514	46,430
Nova Scotia.....	887,908	964,771	1,025,903	1,120,508	1,205,404
New Brunswick.....	756,087	752,887	746,304	899,975	872,856
Quebec.....	29,690,086	32,112,878	33,793,797	34,098,234	35,360,136
Ontario.....	15,985,056	17,297,526	18,268,311	20,142,732	24,350,110
Manitoba.....	2,564,537	2,699,246	2,753,939	3,010,723	3,103,936
Saskatchewan.....	978,773	1,079,309	1,174,131	1,292,279	1,481,821
Alberta.....	996,945	1,174,002	1,339,927	1,498,485	1,728,954
British Columbia.....	2,723,454	2,987,261	3,381,624	3,485,910	3,976,790
Yukon and Northwest Territories.....	63,794	72,148	86,125	65,303	72,700
Canada.....	54,851,844	59,409,198	62,860,927	65,936,440	72,910,592

Domestic Service.—Power used by domestic customers or for household purposes amounted to 17.5 p.c. of the total production of central electric stations. Details of the number of domestic customers served, the kilowatt hours delivered and the costs to the customers, exclusive of direct federal, provincial and municipal taxes on such service, are shown in Table 7. The average consumption per customer and average cost per kilowatt hour vary considerably as between municipalities and also as between provinces but the differences in the average bills are smaller. The availability of low-cost power to domestic users contributes greatly to the high standard of living in Canada. Average consumption per customer has almost doubled since 1946 and costs per kilowatt hour have remained approximately the same.

ELECTRICITY CONSUMED FROM CENTRAL STATIONS BY FARMS AND HOMES

1945-56



7.—Summary Statistics of Domestic Consumption of Electricity 1946-55

Year	Customers	Consumption	Average Consumption per Customer	Average Charge per Annum	Average Charge per kwh.
	No.	'000 kwh.	kwh.	\$	cts.
1946.....	2,104,549	3,881,677	1,844	29.85	1.62
1947.....	2,246,253	4,383,222	1,951	31.28	1.60
1948.....	2,398,847	4,984,280	2,078	33.32	1.60
1949.....	2,619,831	5,678,847	2,168	34.47	1.59
1950.....	2,797,378	6,750,303	2,413	38.97	1.61
1951.....	2,951,988	7,726,114	2,617	43.25	1.65
1952.....	3,112,306	8,741,182	2,809	46.48	1.65
1953.....	3,283,486	9,877,727	3,008	51.25	1.70
1954.....	3,448,980	11,280,513	3,271	55.29	1.69
1955.....	3,645,313	12,759,657	3,500	58.03	1.66

Farm Service.—Table 8 shows the number of farm customers, the average annual consumption, average annual revenue and the average revenue per kilowatt hour sold to these customers in each province in 1954 and 1955. Rural electrification has made considerable progress during the past decade. Farm customers added during 1955 totalled 30,560 and the national total at 441,694 increased by 7 p.c. over 1954. It is estimated that about 74 p.c. of the farms in Canada now enjoy the benefits of power line service. In addition many other farms generate their own electricity by the use of engines, wind-mills, etc.

8.—Farm Service Furnished by Central Electric Stations, by Province 1954 and 1955

Year and Province or Territory	Customers	Consumption of Electric Energy		Revenue Received		
		Total Kilowatt Hours	Average kwh. per Customer	Total	Average per Customer	Average per kwh.
	No.	'000	No.	\$	\$	cts.
1954						
Newfoundland.....	..	..	..	..	..	..
Prince Edward Island.....	4,654	3,912	841	324,549	69.74	8.3
Nova Scotia.....	22,180	17,139	773	769,276	34.68	4.5
New Brunswick.....	38,415	37,112	966	2,097,947	54.61	5.7
Quebec.....	101,271	150,520	1,486	4,351,489	42.97	2.9
Ontario.....	141,647	581,175	4,103	12,658,976	89.37	2.2
Manitoba.....	37,422	132,528	3,541	3,344,872	89.38	2.5
Saskatchewan.....	21,287	43,693	2,053	2,037,643	95.72	4.7
Alberta.....	24,688	73,016	2,958	1,763,112	71.42	2.4
British Columbia.....	19,570	59,479	3,039	1,289,826	65.91	2.2
Yukon and Northwest Territories..	..	..	..	..	..	..
Canada, 1954.....	411,134	1,098,574	2,672	28,637,690	69.66	2.6

8.—Farm Service Furnished by Central Electric Stations, by Province, 1954 and 1955— concluded

Year and Province or Territory	Customers	Consumption of Electric Energy		Revenue Received		
		Total Kilowatt Hours	Average kwh. per Customer	Total	Average per Customer	Average per kwh.
	No.	'000	No.	\$	\$	cts.
1955						
Newfoundland.....	701	1,039	1,476	41,000	58.24	4.0
Prince Edward Island.....	5,420	4,889	902	383,000	70.66	7.8
Nova Scotia.....	23,714	20,164	850	942,000	39.72	4.7
New Brunswick.....	39,786	39,542	994	2,257,000	56.73	5.7
Quebec.....	104,357	172,806	1,656	4,872,000	46.69	2.8
Ontario.....	144,498	621,564	4,302	13,386,000	92.64	2.2
Manitoba.....	38,277	136,410	3,564	3,071,000	80.23	2.3
Saskatchewan.....	28,993	59,564	2,054	2,780,000	95.89	4.7
Alberta.....	31,619	91,138	2,882	2,153,000	68.09	2.4
British Columbia.....	24,326	90,945	3,739	1,854,000	76.21	2.0
Yukon and Northwest Territories...	..	..	..	..	..	..
Canada, 1955.....	441,694	1,238,061	2,803	31,739,000	71.86	2.6

Equipment of Central Electric Stations.—Power station equipment shown in Table 9 includes thermal and hydraulic equipment of generating stations and thermal stand-by equipment of non-generating stations. The capacities of the equipment are manufacturers' ratings and, with regard to water wheels and turbines, it should be noted that the kilowatt hour capacities vary with the supply of water. The majority of the hydraulic stations are large, serving wide areas over heavy transmission lines. With a few exceptions most of the thermal plants are small, serving the needs of local municipalities. In 1955 the capacity of thermal plants increased 8 p.c. as compared with the previous year. In some localities larger units are being installed to replace two or three small units. Equipment data were not included for small industries or firms, particularly in Saskatchewan and Alberta where output was largely consumed by the producing plants.

9.—Capacity of Central Electric Station Equipment by Province 1954 and 1955

Province or Territory	1954			1955		
	Water Wheels and Turbines	Thermal Engines	Generators	Water Wheels and Turbines	Thermal Engines	Generators
	h.p.	h.p.	kva.	h.p.	h.p.	kva.
Newfoundland.....	106,850	7,053	97,786	245,650	6,911	252,561
Prince Edward Island.....	369	21,170	17,245	369	21,170	21,539
Nova Scotia.....	155,605	244,266	340,287	155,605	302,792	458,397
New Brunswick.....	133,600	131,771	232,323	133,600	123,751	257,351
Quebec.....	7,394,133	56,862	6,390,894	7,587,033	58,762	7,645,795
Ontario.....	4,582,876	993,317	4,426,515	5,124,756	992,167	6,116,923
Manitoba.....	715,000	37,250	577,651	795,000	71,390	866,390
Saskatchewan.....	106,500	370,206	408,460	106,500	421,932	528,432
Alberta.....	235,900	306,279	450,943	297,850	340,964	638,814
British Columbia.....	1,015,950	90,107	960,332	1,076,815	104,221	1,181,036
Yukon and N.W.T.....	14,740	2,012	14,327	15,540	2,842	18,382
Canada.....	14,461,523	2,260,293	13,916,763	15,538,718	2,446,902	17,985,620

Export and Import of Electric Power.—Electric energy is exported from Canada only under licence and an export tax of 0.03 cents per kilowatt hour is levied with some exceptions. The export duties for the years ended Dec. 31, 1953 to 1956, were \$727,209,

\$815,492, \$1,330,038 and \$1,531,101, respectively. Exports at the International Boundary for the years 1953-56 are shown in Table 10. There are also large interprovincial movements of electric energy from Quebec to Ontario, and smaller movements between other provinces.

Exports to the United States reached a record high of 5,103,669,000 kwh. in 1956.

10.—Electric Energy Exported from Canada, by Companies, and Imported from the United States 1953-56

Company	1953	1954	1955	1956
	'000 kwh.	'000 kwh.	'000 kwh.	'000 kwh.
Exported to United States	2,421,030	2,718,308	4,433,460	5,103,669
Hydro-Electric Power Commission of Ontario.....	352,129	307,550	372,564	394,249
Hydro-Electric Power Commission of Ontario (surplus)....	616,066	1,111,971	2,831,061	3,634,444
Canadian Niagara Power Company.....	316,641	312,291	295,909	272,678
Canadian Niagara Power Company (surplus).....	69,899	68,748	46,804	38,358
Ontario and Minnesota Power Company.....	44,212	43,655	41,541	43,573
Maine and New Brunswick Electric Power Company.....	28,666	42,138	24,059	20,200
Maine and New Brunswick Electric Power Company (surplus)	7,439	17,143	8,446	3,804
British Columbia Electric Railway Company.....	308,695	150,006	146,770	19,635
Southern Canada Power Company.....	3,787	3,818	4,026	4,839
Southern Canada Power Company (surplus).....	28,777	13,657	30,866	43,169
Quebec Hydro-Electric Commission.....	645,411	643,864	630,627	627,239
Fraser Companies, Limited.....	1,864	3,025	355	979
Detroit and Windsor Subway Company.....	360	336	359	427
Other.....	84	106	73	75
Imported from United States	180,637	119,024	158,562	226,991

Subsection 2.—Ownership and Regulation of Central Electric Stations*

Water power is developed in Canada by provincial commissions, by municipalities and by private companies. The first such provincial commission was formed in Ontario in 1906 to act as trustee for a group of municipalities to develop and distribute electricity. The Hydro-Electric Power Commission of Ontario now generates and purchases power, transmits it to rural and urban municipalities and also serves large power customers. This Commission also exports and imports power to and from the United States and is currently developing water power along the projected St. Lawrence Seaway in co-operation with the New York State Power Authority.

* The information included under the provincial headings of this Subsection has been revised by the various provincial commissions or authorities concerned.

11.—Summary Statistics of Publicly Owned Central Electric Stations 1946-55

Year	Generating Power Plants	Customers	Electric Energy Generated	Power Equipment	
				Water Wheels and Turbines	Total
	No.	No.	'000 kwh.	h.p.	h.p.
1946.....	203	1,650,739	14,739,271	3,274,484	3,612,539
1947.....	230	1,772,919	15,759,275	3,380,900	3,760,833
1948.....	242	1,884,642	16,692,388	3,632,636	4,085,141
1949 ¹	259	2,033,418	17,686,684	3,784,484	4,359,048
1950.....	270	2,200,957	20,061,314	4,558,449	5,171,747
1951.....	270	2,315,309	24,380,802	4,955,247	5,804,690
1952.....	225	2,444,672	26,525,971	5,286,462	6,542,270
1953.....	221	2,583,608	28,447,578	5,618,667	7,382,895
1954.....	..	2,749,481	32,553,238	6,964,177	8,710,318
1955.....	..	2,922,684 ²	38,278,661	7,613,957	9,497,169

¹ Newfoundland included from 1949.

² Not comparable with previous years; only ultimate customers now included. Including customers who purchased for resale, the total is 2,923,131.

A large portion of the power development in Quebec is connected with pulp and paper plants and with the aluminum industry. Such power plants are operated as separate organizations and deliver power to the parent companies at relatively low rates. Substantial blocks of power are also produced in Quebec for use in Ontario.

Table 12 shows statistics of publicly owned central electric stations by province for 1954 and 1955. Table 14 gives comparable statistics for private stations.

12.—Publicly Owned Central Electric Stations by Province 1954 and 1955

Year and Province or Territory	Customers ¹	Electric Energy Generated	Power Equipment	
			Water Wheels and Turbines	Total
	No.	'000 kwh.	h.p.	h.p.
1954				
Newfoundland.....	1,314	4,446	—	2,264
Prince Edward Island.....	2,981	8,507	—	4,190
Nova Scotia.....	65,519	455,279	104,550	141,758
New Brunswick.....	100,956	391,502	39,600	159,481
Quebec.....	494,704	8,342,777	1,796,035	1,831,999
Ontario.....	1,482,388	18,289,567	4,076,797	5,016,958
Manitoba.....	219,426	3,009,962	708,000	745,250
Saskatchewan.....	157,865	627,307	—	320,655
Alberta.....	132,032	514,250	—	204,375
British Columbia.....	92,104	858,066	227,845	271,398
Yukon and Northwest Territories.....	192	51,575	11,350	11,990
Canada, 1954.....	2,749,481	32,553,238	6,964,177	8,710,318
1955				
Newfoundland.....	1,368	4,979	—	2,264
Prince Edward Island.....	3,237	7,315	—	4,190
Nova Scotia.....	66,705	469,293	104,550	141,672
New Brunswick.....	104,771	441,465	39,600	151,536
Quebec.....	516,664	9,078,395	1,796,035	1,831,999
Ontario.....	1,573,437	22,669,096	4,606,077	5,545,088
Manitoba.....	239,423	3,102,701	788,000	858,750
Saskatchewan.....	173,047	807,370	—	372,381
Alberta.....	146,889	635,583	—	251,375
British Columbia.....	96,931	1,004,755	268,345	325,519
Yukon and Northwest Territories.....	212	57,709	11,350	12,395
Canada, 1955.....	2,922,634¹	38,278,661	7,613,957	9,497,169

¹ Figures for 1955 are not comparable with those for 1954 and previous years; only ultimate customers now included. Including customers who purchased for resale, the 1955 total is 2,923,131 and provincial totals are: Newfoundland, 1,368; Prince Edward Island, 3,240; Nova Scotia, 66,734; New Brunswick, 104,779; Quebec, 516,688; Ontario, 1,573,798; Manitoba, 239,430; Saskatchewan, 173,054; Alberta, 146,892; British Columbia, 96,933; Yukon and Northwest Territories, 215.

Summary statistics of privately owned central electric stations are given for the years 1946 to 1955 in Table 13.

13.—Summary Statistics of Privately Owned Central Electric Stations 1946-55

Year	Generating Power Plants	Customers	Electric Energy Generated	Power Equipment	
				Water Wheels and Turbines	Total
	No.	No.	'000 kwh.	h.p.	h.p.
1946.....	397	826,091	26,997,716	6,104,383	6,389,173
1947.....	377	870,408	27,665,524	5,750,950	6,025,254
1948.....	393	937,385	25,697,293	5,837,670	6,134,455
1949 ¹	391	1,042,951	26,731,889	6,188,921	6,524,228
1950.....	395	1,068,867	28,432,404	6,471,350	6,804,494
1951.....	377	1,124,441	30,471,042	6,831,792	7,225,902
1952.....	337	1,175,923	32,883,227	7,264,376	7,679,536
1953.....	303	1,233,847	34,413,349	7,804,711	8,278,142
1954.....	..	1,252,145	33,383,202	7,497,346	8,011,498
1955.....	..	1,302,217 ²	34,631,931	7,924,761	8,488,451

¹ Figures include Newfoundland since 1949.

² Not comparable with previous years; only ultimate customers now included. Including customers who purchased for resale, the total is 1,302,427.

The predominant position of Quebec in the privately owned electric power field can be seen from Table 14, although that predominance is gradually diminishing. Of the total power generated in Canada by all central electric stations in 1955, 36 p.c. was generated by privately owned stations in the Province of Quebec as compared with 39 p.c. in 1954 and 40 p.c. in 1953.

14.—Privately Owned Central Electric Stations by Province 1954 and 1955

Year and Province or Territory	Customers ¹	Electric Energy Generated	Power Equipment	
			Water Wheels and Turbines	Total
	No.	'000 kwh.	h.p.	h.p.
1954				
Newfoundland.....	48,014	275,331	106,850	111,639
Prince Edward Island.....	11,963	34,007	369	17,349
Nova Scotia.....	105,169	665,229	51,055	258,113
New Brunswick.....	27,390	508,473	94,000	105,890
Quebec.....	586,496	25,755,457	5,598,098	5,618,996
Ontario.....	37,904	1,853,165	506,079	559,235
Manitoba.....	14,433	761	7,000	7,000
Saskatchewan.....	11,641	664,972	106,500	156,051
Alberta.....	107,094	984,235	235,900	337,804
British Columbia.....	299,371	2,627,844	788,105	834,659
Yukon and Northwest Territories.....	2,670	13,728	3,390	4,762
Canada, 1954.....	1,252,145	33,383,202	7,497,346	8,011,498
1955				
Newfoundland.....	50,654	706,476	245,650	250,297
Prince Edward Island.....	12,690	39,115	369	17,349
Nova Scotia.....	109,249	736,111	51,055	316,725
New Brunswick.....	28,108	431,391	94,000	105,815
Quebec.....	611,133	26,281,741	5,790,998	5,813,796
Ontario.....	38,462	1,681,014	518,679	571,835
Manitoba.....	3,741	1,235	7,000	7,640
Saskatchewan.....	11,966	674,451	106,500	156,051
Alberta.....	119,618	1,093,371	297,850	387,439
British Columbia.....	313,587	2,972,035	808,470	855,517
Yukon and Northwest Territories.....	3,009	14,991	4,190	5,987
Canada, 1955.....	1,302,217¹	34,631,931	7,924,761	8,488,451

¹ Figures for 1955 are not comparable with those for 1954 and previous years; ultimate customers only are now included. Including customers who purchased for resale, the total is 1,302,427, and provincial totals are: Newfoundland, 50,657; Prince Edward Island, 12,691; Nova Scotia, 109,266; New Brunswick, 28,127; Quebec, 611,222; Ontario, 38,486; Manitoba, 3,746; Saskatchewan, 11,969; Alberta, 119,632; British Columbia, 313,619; Yukon and Northwest Territories, 3,012.

In 1955 private and public stations in Ontario produced about 69 p.c. as much power as Quebec stations; these two provinces generated almost 82 p.c. of the total for Canada.

Because of the absence of free market determination of prices and regulation of services in an industry that is semi-monopolistic, regulation of electrical utilities has been attempted in most provinces. The governing bodies of the provincial electric power commissions, their functions and activities are summarized by provinces in the following paragraphs. Certain privately owned utilities are also covered.

Newfoundland.—There are no publicly owned hydro-electric systems in Newfoundland. The largest water power development in the Province is located at Deer Lake. The plant, which is operated by Bowater's Newfoundland Pulp and Paper Company Limited, has a total capacity of 154,000 h.p. This Company develops hydro-electric energy at Deer Lake mainly for its own use in the manufacture of pulp and paper and also supplies electric power to the Buchans Mining Company for its mining operations and to the Newfoundland Light and Power Company Limited which distributes electricity to consumers in Corner Brook and adjacent communities in the Bay of Islands sections.

The Anglo-Newfoundland Development Company Limited develops hydro-electric power at two plants situated at Grand Falls and Bishop's Falls with a total capacity of 64,000 h.p. The Company utilizes most of its hydro-electric power in the manufacture of pulp and paper and supplies light and power to the towns of Grand Falls, Bishop's Falls, Botwood and adjacent communities.

The Newfoundland Light and Power Company Limited has seven plants that develop hydro-electric energy with a total installed capacity of 55,400 h.p. It distributes electricity to the city of St. John's and the town of Bell Island and the iron mining operations there.

The United Towns Electric Company Limited operates eight plants, of which five are located at Conception Bay, two on the Burin Peninsula and one on Trinity Bay. The Company sells light and power to communities on the Avalon and Burin Peninsula. The West Coast Power Company, a subsidiary of the United Towns Electric Company, operates a plant on Lookout Brook, a tributary of Flat Bay Brook which flows into St. George's Bay.

The Iron Ore Company of Canada operates a plant at Menihek Rapids on the Ashuanipi River in Labrador. The plant has an initial installation of 12,000 h.p. with provision for two additional units. It serves the new iron ore mining centre of the Iron Ore Company near Knob Lake.

Two small companies, the Clarenville Light and Power Company and the Union Electric Light and Power Company Limited, operate plants at Clarenville, Port Union and Trinity.

New power plant construction recently completed or under way is outlined at p. 562.

Prince Edward Island.—The area of Prince Edward Island is only 2,184 sq. miles and three-quarters of its population live in rural areas. Electric power must therefore be supplied to rather thickly populated rural districts interspersed with a considerable number of small municipalities. There is little opportunity for the development of hydro-electric power in the Province since the rivers are short, drainage areas small, and the country is relatively flat. Power is therefore mainly generated in thermal and diesel plants using imported fuels.

The Maritime Electric Company Limited, supplies approximately 75 p.c. of the Island's power requirements of 44,296,160 kwh., with a system peak of 11,000 kw. from its Charlottetown plant. The plant consists of six steam turbines of 22,365 kw. total capacity. In 1956 the Company served 11,565 rural and urban customers over 800 miles of Company-owned distribution line with an additional 1,363 rural customers being served by 310 miles of distribution line owned by the Provincial Government but connected to the Company system. The town of Summerside is connected to Charlottetown by a 33-kv. transmission line and purchases approximately 5,000,000 kwh. annually from the Maritime Electric Company.

Two other power systems supply 25 p.c. of the power consumed. The town of Summerside's station is powered by nine diesel engines, has a total capacity of 2,835 kw. and an annual energy production of 7,700,040 kwh. The station serves 1,996 customers in Summerside and 1,244 customers over 132 miles of rural lines. Approximately 520,000 kwh. of energy is sold to the Scales Hydro Electric Company Limited and about 470,000 kwh. is sold to the Maritime Electric Company Limited through interconnected systems.

The Scales Hydro Electric Company Limited operates a small station in Freetown on the Dunk River. Its total capacity is 250 kw., 175 kw. of which is generated by water power and the remainder by diesel engines. The annual energy production is 453,050 kwh. and 681 customers in surrounding areas are served over 29 miles of distribution line.

Nova Scotia.—The Nova Scotia Power Commission was created under the Power Commission Act of 1919 with the function of supplying electric power and energy by the most economical means available. The Rural Electrification Act of 1937 greatly increased the possibilities for retail service by providing for financial assistance to equalize cost and revenue of extensions approved by the Governor in Council. In 1941 an amendment

to the Power Commission Act authorized the Commission, subject to the approval of the Governor in Council, to regulate and control the generation, transmission, distribution, supply and use of power in the Province. Certain investigatory work is carried on in the Province by the Federal Government in close association with the Commission but the control of water resources is vested in the Crown and administered under the provisions of the Nova Scotia Water Act of 1919. The Commission pays regular fees for water rights.

Financially the Commission is self-supporting, repaying borrowings from revenue. The balance sheet at Nov. 30, 1956, showed total fixed assets of \$41,871,175 including work in progress amounting to \$3,915,638. Current assets amounted to \$643,856. Liabilities are as follows: fixed \$34,084,340; current \$1,935,416; contingency and renewal reserves \$4,055,673; sinking fund reserves \$6,913,749; and general reserves and special reserves \$2,309,145.

The initial development of the Commission was an 800-h.p. installation on the Mushamush River which went into operation in 1921 and delivered 208,752 kwh. in the first complete year of operation. Succeeding years showed a marked growth in installed capacity in the Province, which has reached 107,580 h.p. in hydraulic turbines, 2,806 h.p. in diesel units and 41,125 kw. in steam turbines. Total generation for the year ended Nov. 30, 1956, was 500,366,384 kwh. Construction activity during 1955 and 1956 is outlined at p. 563.

The territory of the Commission extends over the entire Province and embraces seven systems which include 24 generating stations and over 4,500 miles of transmission and distribution lines through which wholesale and retail customers received 481,670,027 kwh. during the year ended Nov. 30, 1956.

The installed capacity and annual output of the various systems of the Nova Scotia Power Commission are given in Table 15.

15.—Capacity and Output of the Nova Scotia Power Commission, Year Ended Nov. 30, 1956

Systems	First Year of Operation	Installed Capacity		Annual Generation	
		Initial	1956	Initial	1956
Hydro					
		h.p.	h.p.	kwh.	kwh.
Western Network—					
Mushamush.....	1921	800	330	208,752	1,078,000
Harmony.....	1943	1,200	1,200	783,913	3,284,480
Roseway.....	1930	560	1,060	365,600	3,253,080
Gulch.....	1952	8,500	8,500	17,843,117	23,858,766
Antigonish—					
Barrie Brook.....	1940	500	500	1,780,734	2,349,320
Dickie Brook.....	1948	3,500	3,500	8,920,000	9,743,840
Sheet Harbour—					
Malay Falls.....	1924	5,550	5,440	6,536,860	11,899,500
Ruth Falls.....	1925	6,290	10,590	7,361,117	32,272,200
Liscomb.....	1951	—	700	—	1,469,489
St. Margaret.....	1921	10,700	15,700	19,538,000	31,899,100
Mersey—					
Original development.....	1928	29,400	28,000	85,863,390	241,594,350
Cowie Falls.....	1938	10,200	10,200	37,866,000	
Deep Brook.....	1950	12,800	12,800	11,154,000	
Lower Great Brook.....	1955 ¹	6,240	6,240	6,685,770	
Tusket.....	1929	2,820	2,820	3,680,540	10,942,789
Total.....	...	...	...	...	373,644,914
Thermal					
Canseau diesel.....	1937	72	2,806	21,650	1,930,710
Canseau steam.....	1945	1,125 ²	1,125 ²	4,437,280	5,663,560
Sheet Harbour steam.....	1951	20,000 ²	40,000 ²	67,158,500	119,127,200
Grand Total.....	...	...	...	...	500,366,384

¹ Started operation July 1955.

² Kilowatts.

New Brunswick.—The New Brunswick Electric Power Commission was incorporated under the Electric Power Act 1920. Generating stations owned by the Commission are as follows:—

<u>Plant</u>	<u>Type</u>	<u>Capacity</u>	<u>Plant</u>	<u>Type</u>	<u>Capacity</u>
		<u>h.p.</u>			<u>h.p.</u>
Musquash.....	Hydro.....	9,320	St. Stephen.....	Diesel.....	2,800
Tobique.....	Hydro.....	27,000	Campobello.....	Diesel.....	300
Grand Lake.....	Steam.....	58,700	Grand Manan.....	Diesel.....	900
Saint John.....	Steam.....	21,500	Shippegan.....	Diesel.....	2,500
Chatham.....	Steam.....	16,800	St. Quentin.....	Diesel.....	750
TOTAL CAPACITY.....					
140,570					

All generating units, with the exception of diesel plants at St. Quentin, Campobello and Grand Manan are interconnected in a province-wide grid system.

The statistical information given in Table 16 shows the growth of the Commission's undertakings since 1952.

16.—Growth of the New Brunswick Electric Power Commission, Years Ended Mar. 31, 1952-56

<u>Item</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>
High-voltage transmission line... miles	749	827	859	888	1,071
Distribution line.....	5,938	6,245	6,681	6,891	6,937
Direct customers.....	No. 57,016	61,054	64,181	66,531	69,415
Plant capacities.....	h.p. 103,310	140,570	140,570	140,570	140,570 ¹
Power generated.....	kwh. 282,405,310	321,232,150	379,369,500	422,750,090	493,609,040
Capital invested.....	\$ 38,286,374	48,120,336	52,077,652	56,634,724	71,140,250
Revenue.....	\$ 6,255,615	7,059,588	7,814,229	8,528,459	9,635,272

¹ Additions to capacity are outlined at p. 563.

Quebec.—*The Quebec Streams Commission.*—Created by S.Q. 1 Geo. V, c. 5, and given additional powers by 3 Geo. V, c. 6 (R.S.Q. 1925, c. 46) and 20 Geo. V, c. 34, the Quebec Streams Commission was authorized to ascertain the water resources of the Province, to make recommendations regarding their control, and to construct and operate certain storage dams to regulate the flow of streams. It assisted companies engaged in such work by the systematic collection of data on the flow of the principal rivers and on meteorological conditions, by investigation of numerous water power sites and determination of the longitudinal profile of a large number of rivers.

On Apr. 1, 1955, the Quebec Streams Commission was abolished and its powers and attributions transferred to the Hydraulic Resources Department, Province of Quebec. The rivers controlled by the Commission at the time of transfer, either by means of dams on the rivers or by regulating the outflow of lakes at the headwaters, were: the St. Maurice, the Gatineau, the Lièvre, the St. Francis, the Chicoutimi, the Au Sable, and the Métis. The Commission also operated nine reservoirs on North River, two in the watershed of the Ste. Anne-de-Beaupré River, and one at the outlet of Lake Morin on Rivière-du-Loup (lower).

Other Reservoir Control.—Storage reservoirs otherwise controlled or operated are: the Lake St. John, the Lake Manouane and Passe Dangereuse on the Peribonca River, and the Onatchiway on the Shipshaw River; the Témiscouata Lake on Madawaska River, controlled by the Gatineau Power Company; Memphremagog Lake on the Magog River, controlled by the Dominion Textile Company; Témiscamingue and Quinze Lakes on the Ottawa River, controlled by the Federal Department of Public Works; Kipawa Lake on the Ottawa River, controlled by the Gatineau Power Company; and Dozois Lake on the upper Ottawa River and Pipmaukin Lake in the Bersimis River watershed, controlled by the Quebec Hydro-Electric Commission.

Power developments on the Saguenay River, benefiting from the Peribonca and Lake St. John reservoirs, have a total capacity of 1,950,000 h.p.

The Quebec Hydro-Electric Commission.—The Quebec Hydro-Electric Commission was established by S.Q. 8 Geo. VI, c. 22, with the object of supplying power to the municipalities, to industrial and commercial undertakings and to citizens of the Province of Quebec at the lowest rates consistent with sound financial administration.

On Apr. 15, 1944, in accordance with the provisions of this Act, the Commission took over: (a) the system of Montreal Light, Heat and Power Consolidated for the generation and distribution of electricity; (b) the undertaking of the Montreal Island Power Company for the generation and distribution of electricity; and (c) all the shares of the capital stock of the Beauharnois Light, Heat and Power Company. Thus the Quebec Hydro-Electric Commission at the end of 1956 controlled among other assets the following hydro-electric plants:*

<u>Plant</u>	<u>River</u>	<u>Installed Capacity</u>
		h.p.
Cedars.....	St. Lawrence.....	206,400
Sault-au-Recollet.....	Rivière-des-Prairies.....	45,000
Beauharnois.....	St. Lawrence.....	1,400,000
Rapid VII.....	Upper Ottawa.....	64,000
Rapid II.....	Upper Ottawa.....	32,000
Bersimis No. 1.....	Bersimis.....	300,000

The Commission operates a public utility system which supplies electric light and power requirements to Metropolitan Montreal and surrounding districts, embracing a population of nearly 2,000,000. From the Cedars plant, electric energy is supplied to the Aluminum Company of America at Massena, N.Y., and through the Beauharnois Light, Heat and Power Company power is sold to The Hydro-Electric Power Commission of Ontario. Sales involved are in the neighbourhood of 100,000 h.p. to Massena, N.Y., and 250,000 h.p. to Ontario.

* The Commission also purchases 135,000 h.p. from the Shawinigan Water and Power Company.

17.—Growth of the Quebec Hydro System 1946-55

Note.—Figures for the years 1935-45 will be found in the 1950 Year Book, p. 572.

Year	Municipalities Served	Customers Served	Power Distributed	
			Total	Primary
	No.	No.	h.p.	h.p.
1946.....	61	309,022	1,085,000	947,000
1947.....	61	318,984	1,127,000	980,000
1948.....	61	330,799	1,202,000	1,034,000
1949.....	61	349,347	1,233,000	1,119,000
1950.....	64	338,026	1,296,000	1,182,000
1951.....	66	387,218	1,312,000	1,312,000
1952.....	67	400,779	1,620,000	1,462,000
1953.....	67	413,439	1,748,000	1,625,000
1954.....	67	430,687	1,700,000	1,687,000
1955.....	67	458,811	1,760,000	1,725,000

Power plant construction recently completed and under way is outlined at pp. 563-564.

18.—Distribution of Quebec Hydro Primary Power by Customer Group 1951-55

(Coincident with Montreal System peak)

System	1951	1952	1953	1954	1955
	h.p.	h.p.	h.p.	h.p.	h.p.
Montreal System.....	803,000	873,000	997,000	1,117,000	1,230,000
Beauharnois Local System.....	171,000	189,000	213,000	154,000	106,000
Beauharnois 25-cycle System (H.E.P.C. of Ontario).....	250,000	250,000	250,000	250,000	250,000
Massena System.....	80,000	135,000	142,000	126,000	99,000
Shawinigan System.....	8,000	15,000	23,000	40,000	40,000
Totals.....	1,312,000	1,462,000	1,625,000	1,687,000	1,725,000

In addition to these generating and distributing systems, the Quebec Hydro-Electric Commission owns the 64,000-h.p. upper Ottawa River plant at Rapid VII, the 48,000-h.p. Rapid II plant and also the Dozois Reservoir. Average primary power capacities for this Northern Quebec System (Cadillac-Noranda district) are: 1951, 30,550 h.p.; 1952, 29,200 h.p.; 1953, 54,000 h.p.; 1954, 80,000 h.p.; 1955, 96,000 h.p.

The Commission delivers some 30,000 h.p. on the south shore of the St. Lawrence River in the Gaspé area. That power is temporarily purchased from Manicouagan Power Company and transmitted across the River through a 69-kv. submarine cable, over a distance of 30 miles. The Commission also purchases about 13,000 h.p. from Saguenay Transmission Company for delivery to mining companies in the Chibougamau area.

Ontario.—The Hydro-Electric Power Commission of Ontario was created in 1906 by an enactment of the Ontario Legislature. In its creation, consideration was given to the recommendations of advisory commissions previously appointed in response to public demand that the water powers of Ontario should be conserved and developed for the benefit of all the people of the Province. The Commission operates under the authority of The Power Commission Act (7 Edw. VII, c. 19) passed in 1907 as an amplification of the Act of 1906 and subsequently modified by numerous amending Acts (R.S.O. 1950, c. 281).

The Commission may have from three to six members, all of whom are appointed by the Lieutenant-Governor in Council. One commissioner must be, and a second commissioner may be, a member of the Executive Council of the Province of Ontario.

The Commission is a corporate entity, a self-sustaining public concern endowed under The Power Commission Act with broad powers to produce, buy and deliver electric power throughout the Province and to exercise certain regulatory functions with respect to the large group of municipal electrical utilities which it serves. The enterprise administered by the Commission is generally referred to as Ontario Hydro.

Initially the undertaking proposed to purchase a block of 100,000 h.p. from the Ontario Power Company Limited at Niagara Falls and to distribute this to 13 municipalities which had signed the original contracts with the Commission to take power at cost. Construction of a transmission system to distribute power to the member municipalities was begun in 1909, and by the end of 1910 power was being supplied to several municipalities through what was known as the Niagara System. In northwestern Ontario the Thunder Bay System was inaugurated when the Commission built a short transmission line and a substation to serve Port Arthur with power purchased from the Kaministiquia Power Company.

The establishment of the original Niagara System was followed in 1911 by the formation of the Severn System and subsequently of other systems to serve groups of municipalities in various sections of the Province. In 1924 the Severn and two other systems were consolidated to form the Georgian Bay System and in 1929 and 1930 a consolidation of

four systems created the Eastern Ontario System. In 1944 the Southern Ontario System came into being through the consolidation of the Niagara, Georgian Bay, and Eastern Ontario Systems.

The Commission continued to operate the Thunder Bay System in the northern part of the Province and in addition it undertook during the 1930's to operate, in trust for the Provincial Government, a group of unconnected systems serving mainly mining and pulp and paper industries, and known as the Northern Ontario Properties. In 1945 its services in northern Ontario were further extended by the purchase of the power system of the Northern Ontario Power Company Limited. On Jan. 1, 1952, the Northern Ontario Properties and the Thunder Bay System were merged for financial and administrative purposes and the consolidation continues to be known as the Northern Ontario Properties.

For the financial and administrative purposes of the Commission, the Province is divided into two parts: that part lying south of a line drawn approximately west from Mattawa on the Upper Ottawa River to Georgian Bay is served by the Southern Ontario System; the part lying to the north is served by the Northern Ontario Properties. The total area is in turn subdivided into nine regions, seven in the south and two in the north, with regional offices located strategically in nine major municipalities. The Southern Ontario System is a fully integrated co-operative power system. Primarily it serves a group of 324 municipalities receiving power at cost under contracts established according to the provisions of The Power Commission Act. In the Northern Ontario Properties, each of the two regions, which at present correspond with the Northeastern and Northwestern Divisions, is an integrated power system as the result of the gradual consolidation of several formerly isolated systems. There is no interconnection between the Northeastern and Northwestern Divisions but there are facilities for the interchange of power between the Northeastern Division and the Southern Ontario System. The Northern Ontario Properties is not a co-operative system although it does serve a group of eight municipalities in its Northwestern Region on a cost-contract basis. Apart from the supply of power to these cost-contract customers, the Northern Ontario Properties are held and operated in trust for the Province of Ontario. The basic principle governing the financial operations of the undertaking is that electrical service is provided by the Commission to the municipal electrical utilities, and by them to their customers at cost.

The Commission's total cost of operation includes the power it purchases, all charges for operation and maintenance of the power systems, interest, and reserve provisions for depreciation, contingencies and stabilization of rates. A sinking-fund reserve is also included for the retirement of the Commission's capital debt. The enterprise from its inception has been self-supporting, except for the Provincial Government assistance of 50 p.c. of the capital cost of rural distribution facilities, undertaken in pursuance of the Province's long established policy of assisting agriculture. The Province also guarantees the payment of principal and interest of all bonds issued by the Commission and held by the public.

The undertaking as a whole involves two distinct phases of operation: (1) Provision of power supply—either by generation or purchase—and its transformation, transmission and delivery in *wholesale* quantities to municipal electrical utilities, certain large industrial customers and rural operating areas. This phase of operation is performed by The Hydro-Electric Power Commission of Ontario. (2) The *retail* distribution of electric energy. In most cities and towns, and in many villages and certain township areas, retail distribution of electric energy is conducted by municipal commissions under the general supervision of The Hydro-Electric Power Commission of Ontario as provided for in The Power Commission Act and The Public Utilities Act. These local commissions own and operate their own distribution facilities. In a small group of municipalities Ontario Hydro owns the distribution facilities and conducts retail distribution through what are called local systems. Throughout most of rural Ontario the Commission, on behalf of the respective townships, operates the distribution facilities and attends to all physical and financial operations connected with the retail distribution of energy to customers in the rural operating areas. Since 1944 the rate structure applying to rural customers designated as farm, hamlet, commercial, and summer service has been uniform throughout the Province.

The growth of Ontario Hydro's physical and financial resources reflects the remarkable industrial and social development of the Province. In 1914 the Commission purchased its first generating station, Big Chute on the Severn River. Later in the same year the first Commission-built generating station was placed in service at Wasdell Falls, also on the Severn River. This early program of purchase and construction of generating stations reached a climax in the great Queenston-Chippawa development, later renamed Sir Adam Beck-Niagara Generating Station No. 1 in honour of the first Chairman of the Commission. This station first delivered power in 1922 but four years later the Commission found it necessary to negotiate for the extensive purchase of power from large Quebec suppliers in order to satisfy Ontario's steadily growing power demands—demands that have continued to increase over the years.

In 1956 the primary and secondary load carried reached a total of 4,909,104 kw. and a total of 29,523,546,866 kwh. was supplied during that year from all the Commission's resources generated and purchased.

Primary power requirements in the Commission's systems have increased over the past 34 years at a rate of 6.6 p.c. per annum. Since 1950 the rate has been 8.3 p.c. per annum and the Commission has been able to keep abreast of requirements only through a most vigorous program of capital construction. Table 20 shows the power development program and indicates the magnitude of construction work completed to date and in progress at four new developments and at five stations already in service. The two major projects under construction are the St. Lawrence Power Project and Sir Adam Beck-Niagara Generating Station No. 2 on the Niagara River.

The 1955 Year Book, at pp. 549-553, contains a descriptive article on the St. Lawrence Power Project. It is a separate undertaking from the St. Lawrence Seaway but the planning, construction and operation of both must be carefully co-ordinated. Construction of the Seaway is the responsibility of authorities created by Canada and the United States. The Power Project is being built jointly by The Hydro-Electric Power Commission of Ontario and The Power Authority of the State of New York and is subject to the approval of a Joint Board of Engineers appointed by the Governments of Canada and the United States. The Commission and The Power Authority will share equally in the cost of constructing the Project, exclusive of the cost of powerhouse machinery and equipment which will be borne by the respective entities. The generating station on the Canadian side will be known as the Robert H. Saunders-St. Lawrence Generating Station.

The new station will have an installed capacity of 820,000 kw. in 16 units and will be of the modified outdoor type. It will form part of a common powerhouse structure extending 3,300 feet from the eastern end of Barnhart Island to the Canadian mainland. Other structures associated with the Project include the Long Sault dam at the upper end of Barnhart Island, the Iroquois dam about 25 miles farther up stream, and dykes as required to contain the headpond. The Project also involves the relocation of transportation and communication facilities, the re-establishment of whole communities beyond the area to be flooded by the headpond, and the improvement of channels in the St. Lawrence River.

First concrete for the powerhouse structure was placed in February 1956, just 18 months after the commencement of construction. By the middle of the summer, pours in excess of 2,000 cu. yards daily were being made and by the end of the year more than 40 p.c. of all concrete work for the Canadian powerhouse was finished. Concrete placing was begun on embedded parts for the first three turbines.

Almost all the residential work in two new townsites was complete and other work on providing essential services was proceeding in these townsites and in other communities where house-moving was under way. One section of relocated highway was open to traffic and track-laying for the relocated Canadian National Railway line was almost finished.

During 1957, the first of four additional units scheduled for installation in the main powerhouse at Sir Adam Beck-Niagara Generating Station No. 2 was placed in service. All four units will be in service in 1958. The six-unit pumping-generating scheme associated with this development was also initially placed in service in the summer of 1957 and all units were in service by the end of the year.

The 1,550-foot control dam being built by the Commission as part of the Niagara River remedial works was scheduled for service in 1957. This marks the completion of the remedial works required under the Niagara Diversion Treaty of 1950 and undertaken on the United States side of the river by the Corps of Engineers, United States Army, and on the Canadian side by The Hydro-Electric Power Commission of Ontario. The cost is shared equally by Canada and the United States.

Other construction under way is outlined at pp. 564-565.

During 1956 the Commission's fixed assets showed an increase of \$160,238,456 and at the end of the year amounted to \$1,732,994,596. The accumulated depreciation provided on these assets was \$190,314,840. Total assets after deducting this accumulated depreciation amounted to \$2,010,680,078.

In 1956 a total of 350 municipal utilities purchased power from the Commission under cost or fixed-rate contracts for resale to their customers. These utilities had fixed assets amounting to \$298,832,207, against which they had provided \$66,539,420 in accumulated depreciation. Municipal utility assets after deducting this accumulated depreciation amounted to \$466,075,117, of which \$183,262,708 represented the equity acquired in the Commission's systems by those utilities operating under cost contracts.

19.—Resources of The Hydro-Electric Power Commission of Ontario Generated and Purchased (All Systems), December 1955 and 1956

Year and System	Commission's Generating Stations				Power Purchased	
	Hydro-electric ¹		Thermal-electric ¹			
	kw.	h.p.	kw.	h.p.	kw.	h.p.
December 1955—						
Southern Ontario System.....	2,596,400	3,480,429	636,000	852,547	681,100	913,002
Northern Ontario Properties—						
Northeastern Division.....	297,400	398,660	1,000	1,340	1,200	1,609
Northwestern Division.....	315,200	422,520	—	—	2,200	2,949
Totals, Resources.....	3,209,000	4,301,609	637,000	853,887	684,500	917,560
December 1956—						
Southern Ontario System.....	2,625,400	3,519,302	616,000	825,737	640,000	857,909
Northern Ontario Properties—						
Northeastern Division.....	297,400	398,660	1,300	1,743	1,200	1,609
Northwestern Division.....	368,100	493,432	—	—	2,700	3,619
Totals, Resources.....	3,290,900	4,411,394	617,300	827,480	643,900	863,137

¹ Dependable peak capacity—the amount of power subject to periodic change as equipment and water conditions vary, which the source is expected to be able to supply at the time of the system's peak demand. For the Commission owned or Commission operated generating stations, it is presumed that all units are available and that the supply of water is normal. Contractual stipulations govern the capacities of sources of purchased power.

20.—Power Development Program of The Hydro-Electric Power Commission of Ontario 1947-60, as at Dec. 31, 1956

System and Development	In Service	Dependable Peak Capacity
		kw.
Southern Ontario System—		
DeCew Falls—Niagara Region.....(extension by 1 unit)	1947	57,000
Stewartville—Madawaska River.....	1948	63,000
Polymer Corporation (additional power purchase contract).....	1948	22,000
Des Joachims—Ottawa River.....	1950-51	372,000
Chenau—Ottawa River.....	1950-51	117,000
Richard L. Hearn—Toronto.....(4 units)	1951-53	400,000 ¹
	1958-60	800,000 ¹
J. Clark Keith—Windsor.....(4 units)	1951-53	264,000 ¹
Otto Holden—Ottawa River.....	1952-55	210,000
Sir Adam Beck—Niagara No. 2—Niagara River.....(12 units)	1954-55	900,000 ¹
	1957-58	300,000 ¹
Pumping-generating station (6 units)	1957-58	170,000 ¹
Robert H. Saunders—St. Lawrence—St. Lawrence River.....(16 units)	1958-60	820,000 ¹
Nuclear Power Demonstration—near Des Joachims Generating Station.....	1959	20,000 ¹

¹ Installed capacity.

**20.—Power Development Program of The Hydro-Electric Power Commission of Ontario
1915-60, as at Dec. 31, 1956—concluded**

System and Development	In Service	Dependable Peak Capacity
Northern Ontario Properties—		
Northeastern Division—		
George W. Rayner—Mississagi River.....	1950	47,000
Northwestern Division—		
Ear Falls—English River..... (extension by 1 unit)	1948	6,000
Aguasabon—Aguasabon River.....	1948	44,000
Pine Portage—Nipigon River.....	1950-54	119,200
Manitou Falls—English River..... (4 units)	1956	} 65,700
Caribou Falls—English River..... (1 unit)	1958	
Whitedog Falls—Winnipeg River..... (3 units)	1958	67,500
Cameron Falls—Nipigon River..... (extension by 1 unit)	1958	19,100
Alexander—Nipigon River..... (extension by 1 unit)	1958	11,300

**21.—Distribution of Power to Systems of The Hydro-Electric Power Commission of Ontario,
Years Ended Dec. 31, 1952-56**

NOTE.—Peak load generated and purchased, primary and secondary, in terms of generation.

System	1952	1953	1954	1955	1956
	kw.	kw.	kw.	kw.	kw.
Southern Ontario System.....	2,798,476	2,909,190	3,162,142	3,740,760	4,160,925
Northern Ontario Properties—					
Northeastern Division.....	283,958	309,100	332,706	366,458	391,442
Northwestern Division.....	247,852	262,356	283,896	329,122	356,737
Totals.....	3,330,286	3,480,646	3,778,744	4,436,340	4,909,104

**22.—Growth of The Hydro-Electric Power Commission of Ontario, Years Ended
Oct. 31, 1947-49 and Dec. 31, 1950-56**

Year	Municipalities Served	Ultimate Customers Served Directly or Indirectly	Total Power Distributed ¹	Assets of Commission and Municipal Utilities
	No.	No.	kw.	\$
1947.....	944	952,853	2,003,139	610,133,232
1948.....	970	1,004,127	1,887,317	708,708,622
1949.....	1,017	1,078,221	2,150,231	898,466,484
1950.....	1,132	1,187,117	2,714,565	1,080,200,039
1951.....	1,175	1,249,366	2,945,990	1,261,739,406
1952.....	1,244	1,317,249	3,330,286	1,442,511,467
1953.....	1,279	1,389,750	3,480,646	1,687,947,082
1954.....	1,301	1,467,034	3,778,744	1,883,311,970
1955.....	1,325	1,540,011	4,436,340	2,040,174,745
1956.....	1,340	1,612,049	4,909,104	2,293,492,487

¹ Sum of the maximum 20 minute coincident peak loads (primary plus secondary) of each of the systems operated by the Commission, given in terms of net output of the sources of supply to each System for the last month of each fiscal year.

Manitoba.—The Manitoba Power Commission was established in 1919 for the purpose of distributing electric energy throughout the Province, with the exception of the Metropolitan Winnipeg area. An agreement, signed in 1955 by the Manitoba Hydro-Electric Board, the City of Winnipeg, the Winnipeg Electric Company and The Manitoba Power Commission, provided for the acquisition by the Commission of the distribution properties of the Winnipeg Electric Company and of the City of Winnipeg Hydro Electric System in the suburban areas adjacent to the city. The transfer of these properties became effective Apr. 1, 1955. The utility currently operates under The Manitoba Power Commission Act (R.S.M. 1954, c. 203), as amended.

The Commission's supply of electric energy for distribution is purchased from The Manitoba Hydro-Electric Board at various points in or near Winnipeg. The Commission has gradually acquired virtually all the municipally owned and local privately owned distributing plants within the Province and now supplies service from a widespread network of transmission lines. The Commission's program of rural electrification which was started in the late 1930's and was designed to bring hydro-electric power at uniform service rates to all rural centres with a population of 20 or over, is now completed and currently serves 521 centres. The farm electrification program, recommended by the Manitoba Electrification Enquiry Commission in 1942 and begun in 1945, was successfully completed as an area coverage project in 1953. The Commission now serves over 43,000 farms.

Now that Manitoba is Western Canada's most completely electrified province, the Commission is placing special emphasis on long-range programs designed to keep progress with the future electrical needs of the Province.

Saskatchewan.—The Saskatchewan Power Corporation, established Feb. 1, 1949, operates under the provisions of the Power Corporation Act, 1950 (S.S. 1950, c. 10), as amended. It succeeded the Saskatchewan Power Commission which operated from Feb. 11, 1929 to Jan. 31, 1949. The main functions of the Corporation are the generation, transmission, distribution, sale and supply of hydro and steam electric energy. Since 1952 the Corporation has been authorized to produce or purchase, and to transmit, distribute, sell and supply power from natural or manufactured gas.

Particulars of the operations of the Saskatchewan Power Commission during the period 1929 to 1948 and of the operations of the Saskatchewan Power Corporation during 1949 to 1955 are given in earlier editions of the Year Book.

The Corporation is experiencing extensive growth. In 1956 it served 796 urban communities (with six or more customers) in retail sales and the urban communities of Saskatoon, Swift Current and Battleford in bulk sales. Activities of the Corporation are extended to the entire Province with the exception of such cities as Regina and Weyburn, which own and operate municipal plants and distribution systems, and Moose Jaw where the local plant and distribution system is owned and operated by National Light and Power Company Limited. A number of small communities, the largest being the town of Kamsack, are not yet served by the Saskatchewan Power Corporation. Some of these utilities, mostly privately owned, were taken over by the Corporation in 1956.

At the end of 1956 the Corporation served 162,594 customers, of whom 27,608 were located in communities which were supplied with power in bulk sales and 134,986 were Corporation retail customers. The latter comprised 96,763 customers in communities considered as urban and 38,223 customers classified as rural, predominantly farmers. During 1956 all these customers absorbed 659,720,877 kwh. of which 622,676,923 kwh. were generated in Corporation plants and 37,043,954 kwh. were purchased in bulk from Regina and from National Light and Power Company utilities. At the end of the year the investment of the Provincial Government in Corporation assets (electric and natural gas) amounted to \$107,485,378.

During 1956 the Saskatchewan Power Corporation owned and operated three steam generating plants (at Estevan, Prince Albert and Saskatoon) and eight diesel plants with capacity of over 500 kw. each (at Hudson Bay, Maple Creek, Meadow Lake, Shaunavon,

Swift Current, Unity, Kindersley and Yorkton). The total plant capability at the end of 1956 was assessed at 202,950 kw., of which 170,000 kw. was located in steam plants and 32,610 kw. in diesel plants.

At the end of 1956 the Corporation owned and operated 41,444 miles of transmission and rural lines. Of this total 9,150 miles of line were added to the system in 1956 comprising 117 miles of 138,000-volt line, 180 miles of 72,000-volt line, 387 miles of 25,000-volt line, and 8,466 miles of 14,400-volt line in connection with rural electrification. Large substations were built in 1956 with a total capacity of 44,200 kva.

23.—Growth of the Saskatchewan Power Corporation 1947-56

NOTE.—Figures for 1929-33 are given at p. 499 of the 1947 Year Book and for 1934-46 at p. 578 of the 1950 edition.

Year	Communities Served in Bulk and Retail Sales	Individual Meters in Communities Served	Power Distributed	Revenue
	No.	No.	kwh.	\$
1947.....	320	63,805	160,420,850	4,442,507
1948.....	366	71,009	186,834,305	5,058,142
1949.....	420	78,389	202,135,947	5,629,372
1950.....	454	84,361	235,926,656	6,363,597
1951.....	535	93,923	278,826,919	7,159,876
1952.....	582	107,942	332,674,176	8,553,619
1953.....	631	122,676	398,211,673	10,363,752
1954.....	664	134,587	472,763,014	11,936,234
1955.....	742	149,134	556,776,981	13,350,177
1956.....	799	162,594	659,720,877	15,566,910

Alberta.—Public ownership of power generating and distributing systems in Alberta is confined to certain urban municipalities. The regulatory authority over privately owned systems is the Board of Public Utility Commissioners which has jurisdiction over the distribution and sale of electricity. The Board has power to hold investigation upon complaint made either by a municipality or by a utility company and, following such investigation, may fix just and reasonable rates.

There are three private utility services in the Province: Calgary Power Limited, Canadian Utilities Limited, and Northland Utilities Limited. A synopsis of these services is given below.

Calgary Power Limited.—This Company has eleven hydro generating plants on the Bow River and its tributaries, west of Calgary, namely: Horseshoe Falls, Kananaskis Falls, Ghost River, Cascade, Barrier, Spray, Rundle, Three Sisters, Bearspaw, Pocaterra, and Interlakes. The Company also operates a steam plant of 88,000 h.p. at Wabamun, west of Edmonton. At Dec. 31, 1956, the Company's total plant capacity was 374,450 h.p. All the hydro plants except Bearspaw are operated by remote control from the Kananaskis Falls plant.

The Company has five reservoirs on the Bow River and its tributaries:

Lake Minnewanka.....	180,000 acre-feet
Interlakes (Upper Kananaskis Lake).....	100,000 acre-feet
Pocaterra (Lower Kananaskis Lake).....	50,000 acre-feet
Spray Lakes.....	200,000 acre-feet
Ghost.....	74,000 acre-feet

An agreement with the City of Medicine Hat provides an additional 33,500 h.p. to the Company from the city's steam plant. Power from these plants is fed into a transmission network which supplies the entire electricity requirements of the cities of Calgary, Red Deer and Wetaskiwin, about 408 towns, villages and hamlets, and a substantial

industrial load in central and southern Alberta. This transmission network is also connected with the municipal utilities of the cities of Edmonton and Lethbridge, Canadian Utilities Limited at Drumheller, Vegreville and Vermilion, and the East Kootenay Power Company in the Crowsnest Pass.

During 1957 an addition to the hydro system is scheduled for completion; this is an extension to the Cascade plant of 23,000 h.p. The Company has about 4,300 miles of main transmission lines and 2,126 miles of distribution lines extending from Plamondon in the north, Milk River and Waterton in the south, and from Chauvin, Macklin (Sask.), Brooks and Bow Island in the east, to Nordegg, Banff and Crowsnest Pass in the west. The cities of Calgary and Red Deer, and the towns of Ponoka, Fort Macleod and Cardston are supplied on a wholesale basis, but all other points on the same system are supplied on a retail basis. At Dec. 31, 1956, electric pumping service was being supplied to over 2,500 oil wells, as well as service directly to other sectors of the oil industry, such as gathering stations, refineries and pipeline pumping. Service was also provided to several industrial plants near Edmonton.

An extensive farm electrification program is in progress in Alberta and at Dec. 31, 1956, the Company was serving 27,096 farms. Calgary Power constructs, operates and provides for the engineering of these co-operatives through a non-profit subsidiary (Farm Electric Services Limited), energy being supplied to the farm co-operative consumers at cost.

Canadian Utilities Limited.—Towns and villages to the north, east and west of Drumheller, and to the north and east of Vegreville are supplied by three inter-connected plants at Battle River, Vermilion and Drumheller. The Battle River plant has a 32,000-kw. coal-fired steam unit; the Vermilion plant has an 8,500-kw. gas turbine and 9,000 kw. in gas-fired steam equipment; and the Drumheller plant has 19,000 kw. in coal-fired steam equipment. Towns and villages north, east and west of Grande Prairie are served by two internal combustion plants. One, situated in Fairview, has 1,200 kw. in a natural gas unit—the other in Grande Prairie has 5,700 kw. in diesel and gas-diesel installations. Towns and villages south of Lesser Slave Lake are supplied by diesel installations totalling 390 kw. at Kinuso and Slave Lake. In addition, a 10,000-kw. gas turbine plant near Sturgeon Lake is to be completed in 1957, which will supply both Grande Prairie and Slave Lake areas. The Company's plant in Fort St. John, B.C., was sold in 1956.

There are tie lines with Calgary Power Limited at Vermilion, Vegreville and Drumheller; and with Northland Utilities Limited at Fairview and Valleyview. The Company serves over 36,200 customers in approximately 330 towns, villages and hamlets (including 111 rural electrification associations) through a network of approximately 3,118 miles of transmission and distribution lines, in addition to 7,427 miles of Rural Association lines. Since 1949, rural electrification in the territory served has been extended to farmers on a co-operative basis whereby the farm or rural electrification association system is constructed and operated at cost for the farmer by the Company. Over 8,000 farmers are receiving electric power service. In 1957, the Company purchased control of the McMurray Light and Power Company, Limited, operating a 300-kw. diesel installation serving the town of McMurray.

Northland Utilities Limited.—This Company, with headquarters at Edmonton, supplies electric service to 6,500 customers located in 36 communities. Diesel generating plants are located in Jasper, Athabasca, High Prairie, Fort Vermilion, McLennan, Peace River, Fairview, Lac La Biche and in Hay River, N.W.T.

A hydro generating plant supplies additional power at Jasper and through 250 miles of 24,000-volt transmission line serves 27 other communities. In addition, approximately 1,200 miles of farm line owned by rural co-operatives serve 1,000 farm customers. A Northland Utilities subsidiary, Uranium City Power Company Limited, generates and distributes electricity to 450 customers in Uranium City, Sask.

Natural gas is supplied to 3,000 customers in 12 communities in Northern Alberta—Fairview, Bluesky, Whitelaw, Brownvale, Berwyn, Grimshaw, Grande Prairie, Spirit River, Sexsmith, Rycroft, Woking and Clairmont.

A subsidiary, Northland Utilities B.C. Limited, supplies gas to 2,200 customers in Dawson Creek and Pouce Coupe, B.C.

British Columbia.—The British Columbia Power Commission was appointed Apr. 17, 1945, under the provisions of the Provincial Electric Power Act. Operations were commenced in August of the same year with the acquisition of electrical properties in several parts of the Province. The following statement shows the growth in the number of customers from 1948 to 1957:—

<i>Year Ended Mar. 31</i>	<i>Services Acquired</i>	<i>Services Installed</i>	<i>Total Services for Period</i>	<i>Cumulative Services to End of Period</i>
	<i>No.</i>	<i>No.</i>	<i>No.</i>	<i>No.</i>
1948.....	1,000	3,431	4,431	27,470
1949.....	831	3,318	4,149	31,619
1950.....	4,686	3,321	8,007	39,626
1951.....	473	4,075	4,548	44,174
1952.....	103	2,600	2,703	45,912
Sold June 1951.....	-325	-640	-965	
1953.....	—	3,597	3,597	49,509
1954.....	—	3,264	3,264	52,773
1955.....	523	3,261	3,784	56,557
1956.....	406	4,382	4,788	61,345
1957.....	4,676	5,525	10,201	69,574
Sold May 1956.....	-337	-1,635	-1,972	

Continued expansion in generating capability, transmission and distribution plant, power requirements, installed services and revenues marked the year ended Mar. 31, 1957. A 23.2-p.c. rise in revenues compared favourably with a 16.8-p.c. increase in expenditures. The resulting operating surplus was \$1,531,937 (before provision for hydro deficiency) an increase of 96.9 p.c. over the 1955-56 operating surplus. Details of construction under way are given on pp. 566-567.

24.—Growth of the British Columbia Power Commission, Years Ended Mar. 31, 1953-57

<i>Item</i>	<i>1953</i>	<i>1954</i>	<i>1955</i>	<i>1956</i>	<i>1957</i>
Customers..... No.	49,509	52,773	56,577	61,345	69,574
Installed plant capacity..... kw.	124,415	174,255	176,866	211,366	284,435
Circuit Miles of Line—					
Transmission (high voltage)..... miles	590	624	689	795	1,009
Distribution primaries..... "	2,704	2,995	3,301	3,781	4,147
Power Requirements—					
Generated..... kwh.	524,502,927	687,158,106	812,793,062	955,007,458	1,058,915,734
Purchased..... "	2,350,721	9,962,128	12,016,339	24,023,708	25,668,700
Totals, Power Requirements... kwh.	526,853,648	697,120,234	824,809,401	979,031,166	1,084,584,434
Annual revenue..... \$	5,902,344	7,103,853	8,227,331	9,730,576	11,992,259
Capital Investment (plant in operation)—					
Generation plant..... \$	26,488,225	33,678,194	35,100,468	44,741,367	55,595,538
Transmission plant..... \$	10,292,920	11,686,982	13,204,511	15,289,408	20,639,658
Distribution and general plants.. \$	14,201,418	15,957,640	18,095,779	21,791,399	25,783,408
Totals, Capital Investment (plant in operation)..... \$	50,982,563	61,322,816	66,400,758	81,822,174	102,018,601

Sources of power for the year ended Mar. 31, 1957, were as follows:—

<i>Source</i>	<i>kwh.</i>	<i>p.c.</i>
Hydro-electric.....	949,348,809	87.5
Diesel-electric—		
Oil fuel.....	89,970,827	8.3
Gas fuel.....	19,596,098	1.8
Purchased.....	8,637,490	0.8
Inter-utility imports.....	17,031,210	1.6
TOTALS	1,084,584,434	100.0

The Northwest Territories and Yukon Territory.—The Northern Canada Power Commission was created by Act of Parliament in 1948 to bring electric power to points in the Northwest Territories where a need developed and where power could be provided on a self-sustaining basis. By legislation passed in 1950 the Act was extended to include Yukon Territory. The name of the Commission, formerly Northwest Territories Power Commission, was changed in 1956.

The Northern Canada Power Commission has authority to construct and operate power plants as required in a territory having an area of over 1,500,000 sq. miles. The Commission is continually investigating power needs in this large area and studying reports on hydro-electric power sites.

The Commission has a hydro-electric power development in operation on the Snare River about 94 miles northwest of Yellowknife, N.W.T., from which power has been supplied to the mines in the Yellowknife area since the autumn of 1948. In the summer of 1949 a transmission line connection was completed to augment the supply of power to the town of Yellowknife.

A diesel generating station and distribution system was put into operation at Fort Smith, N.W.T., in October 1950, and at Fort Simpson in October 1956. These projects supply the various Government establishments such as the Departments of Northern Affairs and National Resources, Transport, National Defence (RCCS), Health and Welfare, and Public Works as well as the Royal Canadian Mounted Police and private commercial consumers and residents of the settlements.

A hydro-electric development on the Mayo River approximately six miles north of Mayo Landing, Y.T., completed in December 1952, delivers power to the mining developments in that area and to the settlement of Mayo Landing. Current construction is outlined at p. 568.

Section 3.—Total Development of Electric Power from All Sources

In Section 1 of this Chapter, water power resources are given with the proportion that so far has been developed. Table 3 of that Section analyzes the hydraulic turbine installation by the proportions in central electric stations, in pulp and paper mills and in other industries. This is useful but does not take into account electric power developed in central electric stations or in other industries from sources other than hydraulic.

Section 2 covers the central electric station industry including stations under public ownership (provincial and municipal governments) and those under private ownership. Neither of these Sections, however, gives a complete presentation of the total electric power developed in Canada. All the hydraulic energy developed is not converted to electric power: there are a number of water wheels and water turbines used for direct drive that are not geared to electric generators. On the other hand certain central electric stations in the Atlantic Provinces, Ontario and the Prairie Provinces generate electricity from steam or internal combustion engines. It is the purpose of this Section to show the total electric power generated from all available sources. Most of the power comes, of course, from central electric stations, the figures having been given in Table 4 of Section 2, p. 568. The total kilowatt hours of electric power generated by central electric stations, is divided into that generated from water power and that generated from thermal engines of all kinds.

Table 25 shows that total electric power generated by central electric stations in 1955 was 72,910,592,000 kwh. For a complete presentation, the power generated by manufacturing industries for their own use and the power generated by the primary mining industry for use in its own operations must be added. There are a few other sources of electric energy included such as electric railways which produced 8,463,000 kwh. in 1955. This production has been taken into the annual total shown in Table 25. There are

numerous small lighting and power plants on farms, rural homes, summer resorts, stores, etc., where electricity from central electric stations is not available and for which no data are available.

25.—Total Power Generated by Central Electric Stations, Manufacturing and Mining Industries 1946-55

NOTE.—Figures for the years 1927-43 will be found in the 1948-49 Year Book, p. 516 and for 1944 and 1945 in the 1956 edition, p. 582.

Year	Central Electric Stations		Manufacturing Industries		Mining Industries		Total ¹
	'000 kwh.	p.c.	'000 kwh.	p.c.	'000 kwh.	p.c.	'000 kwh.
1946.....	41,736,987	93.4	2,714,261	6.1	199,950	0.4	44,662,916
1947.....	43,424,799	92.1	3,467,535	7.4	269,412	0.6	47,174,384
1948.....	42,389,681	89.7	4,590,677	9.7	270,522	0.6	47,262,060
1949.....	44,418,573	87.8	5,898,390	11.7	263,835	0.5	50,592,990
1950.....	48,493,718	88.1	6,266,051	11.4	264,232	0.5	55,036,765
1951.....	54,851,844	89.3	6,369,094	10.4	212,832	0.3	61,446,787
1952.....	59,409,198	89.9	6,450,729	9.8	234,431	0.3	66,103,533
1953.....	62,860,927	89.8	6,901,443	9.9	215,337	0.3	69,988,286
1954.....	65,936,440	89.1	7,628,365	10.3	398,488	0.5	73,976,639
1955.....	72,910,592	88.0	9,432,663	11.4	463,860	0.6	82,815,578

¹ Includes power generated by electric railways for their own use.

CHAPTER XIII.—THE FISHERIES

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Section 1.—Canadian Commercial Fisheries Resources

Canada has the enviable position of being the country closest to some of the world's most prolific fishing grounds and as a consequence is one of the world's principal fish producers and fish exporters. Rich harvests are drawn from the Atlantic and Pacific as well as from the country's many freshwater lakes and rivers.

Canada's commercial fisheries resources, including a detailed account of the Atlantic, the Pacific, the freshwater and the northern fisheries, are covered in the 1955 Year Book, pp. 578-590. The following special article deals in detail with groundfish, the most important species of Canadian fisheries.

GROUNDFISH SPECIES IN THE CANADIAN FISHERIES*

Demersal or groundfish species are the most important group in the Canadian fisheries, accounting for almost one-half by volume and one-third by value of the catch of all species of fish and shellfish. This species is particularly important to the Atlantic fisheries where it makes up two-thirds or more by weight and one-half by value of the total catch. The proportion in British Columbia is around 5 p.c. of the volume and 12 to 18 p.c. of the value.

* Prepared by T. H. Turner, Director of Information, Department of Fisheries, Ottawa.

VOLUME AND VALUE OF GROUNDFISH LANDINGS, AND PROPORTION OF TOTAL CATCH, 1956

Area	Volume			Value		
	Groundfish ¹	All Fish and Shellfish ²	Groundfish as Percentage of Total	Groundfish ¹	All Fish and Shellfish ²	Groundfish as Percentage of Total
	'000 lb.	'000 lb.	p.c.	\$'000	\$'000	p.c.
Atlantic Provinces.....	989,373	1,348,691	73	26,774	53,046	50
Newfoundland.....	487,314	568,337	86	11,419	13,896	82
Maritimes and Quebec.....	502,059	780,354	64	15,355	39,150	39
British Columbia.....	41,439	674,354	6	6,154	35,846	17
Inland (freshwater).....	—	111,000	—	—	13,600	—
CANADA.....	1,030,812	2,134,045	48	32,928	102,492	32

¹ Includes halibut and other flatfish species together with cod, haddock, hake, pollock, cusk, redfish, wolf-fish, dogfish, and Pacific "cod" species and rockfishes.

² Excludes fish livers, seaweeds, bait worms and seals.

In the Atlantic fishery cod is first in landed value followed by haddock, and on the Pacific Coast halibut is by far the most important of the groundfish. Halibut and other flatfish species, although true groundfish, are not always classed as such in commercial usage. For instance, a United States tariff classification of groundfish fillets includes only cod, haddock, hake, pollock, cusk and rosefish (the latter is usually called redfish and marketed as ocean perch). In addition to these, Atlantic groundfish species include wolffish (ocean catfish), turbot (Greenland halibut), skate and dogfish. The sub-group of small flatfishes includes American plaice, witch or grey sole, winter flounder and yellow-tail flounder in Atlantic waters, and Pacific species such as lemon sole, rock sole, butter sole, brill and Dover sole. Other Pacific groundfish are grey cod, lingcod, blackcod or sablefish, various rockfishes (including those designated red snapper and ocean perch) and dogfish.

STOCKS AND THEIR UTILIZATION

The annual catch by Canada and other nations is estimated to take about 15 p.c. of the combined total stocks of groundfish on the Atlantic Continental Shelf and 6 or 7 p.c. of Pacific groundfish stocks off Canadian shores. Some individual species such as haddock, the Pacific rockfishes, blackcod and grey cod are being exploited quite heavily but the annual catch of others, such as dogfish, represents a negligible proportion of the existing stock. The degree of exploitation or utilization is, of course, closely related to the demand for the species as expressed by the price the fisherman is able to obtain for his catch to the cost of landing that catch. The cost of production at any given level of exploitation is governed by many factors—the prospective and realized returns to capital investment necessary to secure and maintain in the fishery the requisite boats, gear and working capital; the returns to labour necessary to retain the requisite number of fishermen in the industry; and the location, size and density of the fish stocks that are being exploited.

An unexploited stock tends to become so dense that growth is slow and natural mortality is high. Thus, more intensive fishing may have the somewhat paradoxical effect of reducing the size of the stock yet raising the level of sustained yield, as removal of the larger and older fish increases the rate of growth or the rate of reproduction of the stock, or both. Furthermore, if a stock is being overfished, less intensive fishing may raise both the size of the stock and the level of sustained yield. On these grounds, an increased annual catch is considered possible, with appropriate fisheries management and conservation policies, for Pacific halibut, lingcod and small flatfish, and for most of the Atlantic groundfish species except haddock.

The Atlantic species are dominant in the groundfish group, constituting 85 to 90 p.c. of the combined groundfish stocks and supplying an even greater proportion of the volume of Canada's annual groundfish catch. However, because of the large amount of relatively high-priced halibut in the Pacific catch, the Atlantic species constitute a smaller proportion of the value of groundfish landings—about 80 p.c. At present rates of utilization, the Atlantic groundfish stocks as a group show a higher potential for increased yield.

The richest fishing grounds lie within the 250-fathom depth contour on the Continental Shelf. Shallow-water "banks" are found many miles from shore on the Atlantic side but, because of the mountainous, steeply sloping character of the British Columbia coastline, the shallow-water area there is much narrower, although exceptionally well sheltered. The concentration of various species of fish in these coastal waters near to shore is the basis for a fishing industry in which costs are low enough to serve mass food markets with many groundfish products, such as frozen fillets for the North American trade and dried salted cod for the Caribbean and southern European countries.

Atlantic groundfish are caught inshore all along the coast and offshore in the Gulf of St. Lawrence, on the Grand Bank of Newfoundland and on various banks east of Labrador and Newfoundland and east and southeast of Nova Scotia and the State of Maine. They are caught by small and large craft, using principally line gear with baited hooks (hand-lines and long-lines) and drag-nets (otter-trawl and Danish seine) according to the suitability of the method: line gear is unsuitable for species with small mouths and

drag-nets cannot be used over very rough-bottomed fishing grounds. Trap-nets are used in some locations such as the east coast of Newfoundland, where heavy inshore runs of certain species (chiefly cod) occur.

ATLANTIC SPECIES

The Atlantic cod (*Gadus callarius*) is found on both sides of the north Atlantic Ocean, but so dense have been the stocks of the western Atlantic that several European countries have fished them ever since the Cabots discovered Newfoundland in 1497. Cod has long been the basis of the salted fish industry and later of fresh and frozen fillet production in New England, Quebec, Newfoundland and Nova Scotia, and on a smaller scale in New Brunswick and Prince Edward Island. Cod is found in North American waters from Greenland in the Arctic almost to Cape Hatteras in southern United States and it constitutes nearly two-thirds of the known groundfish resources in those waters. In recent years, almost one-half of the total volume of Canadian Atlantic fish and shellfish landings has been cod; of the total landed value, cod contributed just under 30 p.c. Its importance to the Newfoundland fishing industry is particularly great—about two-thirds of the total value of Newfoundland fishermen's landings. The annual catch by all nations is estimated to take only about 16 p.c. of present cod stocks in North American waters. There is every likelihood of expansion in the annual harvest to meet the needs of growing populations.

Haddock, taken mostly with drag-nets from the Grand Bank to Cape Cod, is at present next to cod in commercial importance. The use of mechanical filleting equipment in recent years has enabled processors to utilize younger and smaller haddock—much of it processed into frozen blocks for later conversion into breaded fish sticks. The catch has been increased in consequence to an estimated 42 p.c. of current stocks. This is expected to cause a substantial reduction in the stocks and, eventually, in the annual catch.

Redfish rank third in importance among the Atlantic groundfish species. They are taken exclusively with drag-nets in deep cold water from New Jersey to Labrador, chiefly in the Gulf of Maine off the coast of Nova Scotia, and west and south of Newfoundland. The development of the redfish fishery is comparatively recent, coincident with the growth of the market for frozen ocean perch fillets, particularly in the American mid-west. The species is slow growing and, although some of the more remote northern grounds remain unexploited and although new stocks may be found, the total stocks are expected to diminish. Some increase in annual yield, however, is probable as the older fish are removed and the food supply is improved for those remaining.

Landings of Atlantic halibut in recent years have ranked close to those of redfish in value although stocks and annual catch are less than one-tenth of those of the Pacific Coast. The catch is taken in deep water throughout the Atlantic area, mainly by long-liners but to some extent incidentally by druggers. Although present utilization is only about 10 p.c. of the stocks, little change in the intensity of fishing is expected.

The small flatfishes—plaice, witch, winter flounder and yellowtail flounder—are marketed usually as sole fillets. American plaice are found from Long Island, New York, to the Arctic; the others are more localized. All are caught with otter-trawl and Danish seine but plaice may also be taken with line gear. The total catch of small flatfishes could be increased even if some reduction in the total stock resulted.

Pollock, hake and cusk are sometimes statistically included with cod and haddock as related species. All are found in the more southerly parts of the Canadian Atlantic Coast area. Pollock are taken with line gear and marketed chiefly in the dried salted form; cusk and the hake are seldom concentrated and so are usually caught incidentally with other groundfish species. Cusk is a food-fish of excellent quality but hake soften quickly, even when iced, which makes their processing difficult and, in consequence, large quantities are discarded at sea. Silver hake or whiting is a southern species and may move out of Canadian waters if the ocean temperature grows colder, but white hake and squirrel hake

are found throughout much the same region as pollock. The development of a stronger market for groundfish products could be expected to lead to increased utilization of these species.

The common or striped wolffish occurs mainly in the southern part of the Atlantic Coast area and the spotted wolffish farther north. Wolffish are, like cusk, excellent food-fish, being marketed chiefly as ocean catfish fillets, but the density of stocks is low and they are usually caught incidentally in line fishing or dragging for other species. Like halibut, the wolffish would be taken more intensively only if there were a substantial increase in their price relative to cod prices.

Turbot, or Greenland halibut, is a flatfish species caught with line gear principally along the northeast coast of Newfoundland. At present it is salted and dried, but expansion of the fishery could follow development of facilities to market it in fresh or frozen forms.

There are substantial stocks of skate and dogfish in Atlantic waters but little use is being made of either, although both species could be utilized for food or for reduction into fish meal and oil. Some skate is caught incidentally but there is no demand for dogfish as a food, and evidently a fishery for reduction purposes would not pay in the present state of technology and demand for the products.

PACIFIC SPECIES

Pacific halibut are found on the Continental Shelf from the Aleutian Islands to Juan de Fuca Strait, mostly in depths of 30 to 250 fathoms. Line gear is used mainly but some are taken by trolling. The bulk of the catch is marketed in frozen dressed form. The total catch of about 60,000,000 lb. annually, of which the Canadian portion is somewhat less than 40 p.c., is estimated to be about 9 p.c. of stocks. On the basis of the recovery of the stocks over the past twenty years, a moderate increase in exploitation is considered feasible. The fishery is under the control of an international commission under the Northern Pacific Halibut Convention of 1953 between Canada and the United States, the first agreement for joint regulation of the halibut fishery having been signed in 1924. An annual catch quota has been maintained and competition among fishermen for a higher share of the quota has resulted in a pronounced increase in the size and efficiency of the halibut fleet.

The grey cod is the true cod of the Pacific and is related to the cod of the north Atlantic. The species is abundant in Hecate Strait and off the west coast of Vancouver Island. Otter-trawlers account for the greater part of the catch but small quantities are taken incidentally by line fishermen. The catch is landed dressed and then filleted for freezing, but some is sold in the fresh market or smoked. Canadian annual landings of grey cod are 4,000,000 to 5,000,000 lb.—less than one-half of the total catch.

The blackcod or sablefish is not a true cod but a member of the skilfish family. Most of it is taken in the off-season for halibut, with line gear in deep water at 70 to 250 fathoms off the Queen Charlotte Islands and the coast of Alaska. The major part of the catch is smoked. The Canadian catch of about 1,500,000 lb. is one-quarter of the total.

The lingcod is one of the larger commercial fish of the Pacific Coast, found from California to Alaska in both shallow and deep water. The greater part of the British Columbia catch is taken with line gear but some is taken by jigging and with otter-trawls. Lingcod are marketed either fresh or frozen, whole or filleted. The liver oil has a high vitamin A content. The volume of catch as well as the price received by the fisherman has varied widely from year to year.

There are 23 or 24 species of rockfish on the British Columbia coast, of which about ten have been fished quite heavily during the past decade for the fresh and frozen fillet trade and for fish stick production. They are taken over a wide range of depths up to 300 fathoms with hand-line, long-line, and trawls. The annual catch is about 9,000,000 lb.—but only 10 p.c. of it by Canadian vessels. Rockfishes are slow growing and it is unlikely that the present catch rate, based upon accumulated stocks of older, larger fish, can be long maintained.

About sixteen species of flatfish, in addition to halibut, are found in British Columbia waters. Although they belong to the flounder and dab families, they are popularly known as 'soles'. The largest is the brill and other important species are the lemon sole and rock sole or 'rough-back'. These species are caught extensively off the west coast of Vancouver Island, in Queen Charlotte Sound, in Hecate Strait and in Georgia Strait and are marketed as fresh or as frozen sole filets. The stocks could support an increase in catch but, as with the other Pacific groundfish except halibut, an increase would make little difference in the total Canadian groundfish catch.

Dogfish belong to the shark family and in their predatory activities cause great damage to fishing gear and netted fish. The Pacific dogfish industry reached a peak in 1944 when there were nearly 8,000,000 lb. of dogfish livers landed worth \$2,700,000 plus an additional amount for meal and fertilizer. In the past decade, however, competition from Japanese liver products and the development of synthetic vitamin A have caused a decline in the industry. The consequent increase in dogfish stocks has brought requests for a subsidy to assist a fishery for meal and oil as a means of reducing the damage done by dogfish to other fisheries.

During the past five years there has been a rapid growth of a British Columbia trawl fishery specifically for scrapfish for fur farms, as the demand for mink feed outgrew the supply of horse meat and fillet scraps. This fishery concentrates on the turbot or arrow-tooth sole and, when winter weather prevents fishing on the more exposed grounds, on the whiting or big-eye. Smaller quantities of hake and other species are also utilized.

Section 2.—Governments and the Fisheries

The British North America Act gave the Federal Government full legislative jurisdiction for the coastal and the inland fisheries of Canada and under this Act laws are made for the protection, conservation and development of the fisheries throughout the country. However, the provinces have, by agreement, assumed administrative responsibilities in varying degree. Consequently, though all the regulations governing fishing are made by the Federal Government, the work of administering the fisheries (enforcing the different laws and regulations, inspecting fish products, issuing licences, etc.) is done without duplication of staff either by federal or by provincial officers, according to arrangement.

Specifically, all tidal or sea fisheries except those of the Province of Quebec are administered by the Federal Department of Fisheries, and the freshwater or non-tidal fisheries with some exceptions are administered by the provincial departments. Quebec takes responsibility for all its fisheries including those in salt waters. Ontario, Manitoba, Saskatchewan and Alberta look after their freshwater species. In British Columbia provincial government control extends to the freshwater forms and the Federal Government is responsible for marine and anadromous species. In Prince Edward Island, Nova Scotia, New Brunswick, Newfoundland and the Yukon and Northwest Territories, the Federal Government maintains complete control; administration of the fisheries of the National Park areas throughout Canada is the responsibility of the Canadian Wildlife Service, Department of Northern Affairs and National Resources. (*See pp. 27-28.*)

Subsection 1.—The Federal Government*

The work of the Federal Government in the conservation, development and general regulation of the nation's coastal and freshwater fisheries is performed by three agencies under the Minister of Fisheries:—

- (1) The Department of Fisheries proper with headquarters at Ottawa, Ont., and area offices under Chief Supervisors at Vancouver, B.C., Winnipeg, Man., Halifax, N.S., and St. John's, Nfld.
- (2) The Fisheries Research Board of Canada with headquarters at Ottawa and eight stations across Canada.
- (3) The Fisheries Prices Support Board with headquarters at Ottawa.

* Revised by the Department of Fisheries, Ottawa.

The Department of Fisheries.—The chief responsibilities of the Department of Fisheries throughout Canada are, in brief: to conserve and develop Canada's primary fishery resources; to encourage the development of the fishing industry in the national economy; to inspect fish products, establish standards of quality and promote the optimum utilization of the resource; and to develop a proper public understanding of the resource and the industry.

The larger part of the staff of the Department is stationed in the field and is composed mainly of protection and inspection officers. The protection officers, including those on the Department's 76 patrol and protection vessels, are concerned with the enforcement of the conservation regulations under the Fisheries Act and other Acts designed to ensure a continuing maximum yield of fish and are also responsible for the inspection of fish products and processing plants under the Fish Inspection Act and relevant section of the Meat and Canned Foods Act.

A conservation program is carried out by the Conservation and Development Service of the Department. Protection officers enforce regulations pertaining to restricted areas, close seasons, limitations in location and types of gear, and also inspect spawning streams and keep them clear of obstructions. Biologists investigate such problems as pollution and water supply, and engineers construct fishways to enable fish to bypass obstructions of all kinds. Hatcheries are maintained to restock waters where the fisheries are under federal administration.

For the past few years a bounty has been paid for the killing of the parasite-carrying harbour seals along the Newfoundland and Labrador coasts at a rate of \$10 for adults and \$5 for young seals. During 1955, 276 adults and 1,435 young seals were destroyed.

Inspection of fish and fish products to ensure a high standard of quality is carried out by the Inspection and Consumer Service, and fish inspection laboratories are maintained on the Atlantic and the Pacific Coasts. This Service also has a staff of home economists who operate test kitchens in Ottawa, Toronto, Vancouver, Montreal and Halifax and conduct demonstrations and lectures on methods of preparing and cooking fish and fish products.

Through the medium of printed material, films, radio, television and exhibitions, the Information and Educational Service of the Department informs the public on the various aspects of the industry and the work of the fisheries service, with the object of developing a better understanding of the resource and those engaged in its exploitation. This Service works closely with the Conservation and Development Service in matters concerning the conservation of fisheries and with the Inspection and Consumer Service toward encouraging increased consumption of Canadian fish products in the United States and other markets.

The Economics Service engages in two related fields of responsibility: (1) to provide the government and the commercial fishing industry with current information, including statistical data, under the general heading of trade intelligence, and (2) to carry out studies and investigations in the primary fisheries and in the processing and distribution of fish products. In the first field, the Service works in close co-operation with the Dominion Bureau of Statistics and the foreign trade branches of the Department of Trade and Commerce; in the second, there is similar collaboration with the Fisheries Research Board. In both, a necessary contribution is made to the formulation of policy for fisheries management, industrial development and market services.

In addition to these regular services the Department assists the commercial fishing industry in several special ways. To promote efficient primary fishing operations and improve the marketing of fishery products, assistance is provided for the construction of draggers and long-liners and for bait-freezing and storage facilities on the Atlantic Coast. For each new trawler built in Canada the owner is permitted a licence to operate a used trawler imported from either the United Kingdom or the United States and registered in Canada after payment of duty. An applicant wanting only one trawler may import a used one from the United Kingdom without having to lay down a new keel in Canada.

This policy applies to ships purchased from any country entitled to most-favoured-nation treatment in accordance with Canada's obligations as a signatory of the General Agreement on Tariffs and Trade.

The Fishermen's Indemnity Plan affords low-cost protection from losses of boats and lobster traps through storms and other causes. The Plan, in operation since 1953, meets a long-standing need on the part of small-scale individual fishermen. Vessels valued at from \$250 to \$7,500 may be insured with payment of a premium of 1 p.c. of the appraised value per annum. Up to Mar. 31, 1956, a total of 2,999 fishing vessels with an appraised value of \$6,062,140 had been insured under the Plan. In response to considerable demand for a similar type of protection against unusual losses of fishing gear and equipment other than vessels, a first step was taken by the introduction of regulations giving a measure of compensation to lobster fishermen suffering abnormal losses of lobster traps, provided that a small premium has been paid by the fisherman. The premium rate varies in accordance with conditions in the various fishing areas of the Atlantic Provinces and Quebec but is generally about 4 p.c. of the value of the traps. Indemnity is provided at about 50 p.c. of the value on losses in excess of the 20 to 25 p.c. normal annual disappearance.

The Department also provides financial assistance to educational institutions agreeing to carry out specialized educational work among fishermen.

The Fisheries Research Board.—The Fisheries Research Board of Canada was established in 1937 to succeed the Biological Board of Canada. The Board functions as the scientific arm of the Department of Fisheries and seeks to improve and expand Canadian fisheries through scientific research. It operates four biological research stations, two oceanographic groups, three technological research stations, an engineering service and a unit which devotes its activities to research on sea mammals and studies of fisheries in the Canadian Arctic. The Board consists of a full-time chairman and up to 18 members appointed by the Minister of Fisheries; the members include Canadian scientists in fields related to the Board's work and businessmen acquainted with fishing and the fish trade.

The biological work of the Board is designed primarily to provide a general scientific basis for the conservation and wise management of Canada's vast marine and freshwater fishery resources. Investigations include the life histories of the various species of commercial importance, their population dynamics, their diseases and enemies. Also investigated are positive cultural methods in areas where some control of the environment is possible, new fishing grounds are sought and experiments in improvement in fishing methods undertaken. The biological work on the Atlantic Coast is conducted by stations at St. Andrews, N.B., and St. John's, Nfld.; Arctic work is directed from Montreal, Que.; work on freshwater fish is directed from a station at Winnipeg, Man.; and Pacific Coast work is directed from a station at Nanaimo, B.C.

Oceanography includes the study of the biological, chemical and physical aspects of the marine and freshwater environments of fish and other aquatic organisms of importance. This information is necessary to understand the occurrence and distribution of the fish and is carried out by the Board's two oceanographic groups, one on each coast.

The technological studies are aimed at making the best use of Canada's fish catches. Investigations are conducted towards improving methods of preserving and processing and in the utilization of fish wastes. In recent years considerable work has been done on mechanization to further develop higher efficiency in the industry. The technological work on the Atlantic Coast is done at stations at Halifax, N.S., and Grand River, Que., and applied engineering work for Newfoundland is under the supervision of a unit at St. John's, Nfld. A station at Vancouver, B.C., undertakes Pacific Coast studies.

The Fisheries Prices Support Board.—Under the Fisheries Prices Support Act, passed in 1944, this Board was set up in July 1947 to recommend to the Government price-support measures when severe price declines occur. The Board functions under the

direction of the Minister of Fisheries and consists of a chairman, who is a senior officer of the Department of Fisheries, and five members chosen from private and co-operative firms in the industry, representative of the various fish-producing regions of Canada.

The Board has authority to buy quality fishery products under prescribed conditions and to dispose of them by sale or otherwise, or to pay to producers the difference between a price prescribed by the Board and the average price the product actually commands. The Board has no power to control prices nor has it any jurisdiction over operations in the fishing industry or the fish trade. Money necessary for dealings in fishery products is available to the Board from the Consolidated Revenue Fund to a maximum aggregate amount of \$25,000,000 but only on recommendation of the Federal Treasury Board and authorization of the Governor in Council.

The Board maintains a small staff for administrative activities. The work is closely integrated with that of the Department's Economics Service and, where possible, services required by the Board are carried out by Department personnel. The Board has carried out field surveys on market conditions and possibilities and on factors affecting the income of fishermen in the various producing areas. The financial position of fishermen is kept under continuous review and recommendations are made to the Government on the basis of the findings. Special investigations are made when serious problems arise in particular areas.

International Fisheries Conservation.—Conservation of the resources of the high seas can be effected only with regulations, and for this purpose international treaties have had to be made. Canada's obligations under such treaties with the United States and other countries are administered by the Department of Fisheries.

Canada and the United States have led the world in joint fisheries conservation development. Major examples of this joint effort are the International Pacific Halibut Convention, concerned with the preservation of the halibut stocks of the north Pacific and the Bering Sea, and the International Pacific Salmon Fisheries Convention, concerned with the conservation and development of the sockeye salmon of the Fraser River. Investigations carried out under the auspices of Commissions appointed under these conventions, subsequent regulation and limitation of catches, and the construction of salmon fishways appear to have been successful in arresting and reversing an earlier trend towards depletion of these fisheries. Another example of restoring a depleted marine resource by international agreement and action is that of the fur seals of the Pribilof Islands in the Bering Sea. Under a treaty signed in 1911, known as the (North Pacific) Sealing Convention, pelagic sealing was prohibited while the animals were migrating to and from the Pribilofs where most of them breed. This treaty had been signed by the United States, Canada, Russia and Japan, and was one of the earliest conventions on resources of the sea. In 1941 Japan abrogated the treaty and the following year Canada and the United States signed a Provisional Fur Seal Agreement under which Canada, in return for abstaining from pelagic sealing, received 20 p.c. of the annual catch, which was supervised by the United States. A conference to re-negotiate the original convention for the management of north Pacific fur seals was begun in Washington in November 1955, with representatives present from the four countries which had been signatory to the 1911 treaty. A new settlement was signed by the original four countries on Feb. 9, 1957.

In 1949 the Government of Canada became a signatory, along with nine other countries, to the International Northwest Atlantic Fisheries Convention which came into force in 1950. The Commission established under this Convention, with headquarters at Halifax, N.S., makes scientific investigations of the fishery resources of the northwest Atlantic. The Commission has no regulatory powers but can make recommendations to the respective governments regarding measures that may be necessary for maintaining the stocks of fish that support the international fisheries in the Convention area. Treaty signatories are: Canada, Denmark, Iceland, the United States, the United Kingdom, France, Italy, Norway, Portugal and Spain.

A step towards international action in regulating the high seas fisheries of the northern Pacific Ocean was achieved in December 1951 when Canada, the United States and Japan conferred at Tokyo. The resulting Convention was ratified by the three contracting governments and instruments of ratification were deposited at Tokyo in June 1953. The treaty is known as the International Convention for the High Seas Fisheries of the North Pacific Ocean and aims at providing the maximum sustained yield of the fishery resources of the northern Pacific non-territorial waters with each of the parties assuming obligations to encourage conservation measures. The Commission established under this Convention will study the northern Pacific fisheries, determine the application of the treaty principles and will promote and co-ordinate the scientific studies necessary for ascertaining conservation programs.

The seventh, and latest, international fisheries agreement to which Canada is a signatory is the Great Lakes Fisheries Convention, which provides for joint action by Canada and the United States in Great Lakes fishery research and in a program for the control of the predator lamprey in these waters. This Convention came into force in October 1955. (See also pp. 603-604.)

Canada is a member of the International Whaling Commission and is obligated to collect biological data on whales caught by Canadian vessels. Whaling operations are conducted off the coasts of Newfoundland and British Columbia.

Subsection 2.—The Provincial Governments*

An outline of the work undertaken by each of the provincial governments in connection with administration of commercial and game fisheries is given in the following paragraphs.

Newfoundland.—The union of Newfoundland with Canada on Mar. 31, 1949, brought about a transfer of some responsibilities in fisheries administration. The Newfoundland Fisheries Board remained the agency of government in the supervision of salt codfish marketing but fish and plant inspection, operation of bait depots, etc., became the concern of the federal Department of Fisheries. The Board, formerly responsible to the Government of Newfoundland through the Commissioner for Natural Resources, has been made responsible to the federal Minister of Trade and Commerce.

The Provincial Government is concerned mainly with improvement and development in fishing and production methods and has conducted experiments in long-lining and deep water trawling, in the construction of multipurpose fishing craft and in the exploration of potential fishing grounds. Steps are being taken to secure more efficient use of fisheries salt. Loans have been made available to processors for the establishment or development of fishing fleets and processing plants and to fishermen for the construction and purchase of modern vessels capable of a greater variety of fishing operations and larger production.

In 1951 the Governments of Canada and of Newfoundland set up the Newfoundland Fisheries Development Committee consisting of representatives of fishermen, processors and exporters, and of both Governments. The objective of this Committee was to establish the role of each sector of the industry and each government, jointly or severally, in the organization and development of the fisheries. Action has been taken by both Governments along lines recommended by the Committee in its final report of April 1953. The Newfoundland Fisheries Development Authority was set up by the Government of Newfoundland to carry out the Province's share of the development program, while the federal Department of Fisheries continues to administer provincial fisheries legislation and to undertake development work in collaboration with the Authority.

The inland waters of Newfoundland, though they provide excellent sport fishing, are not commercially exploited to any significant degree. The lakes and ponds remain under the authority of the Natural Resources Branch of the provincial Department of Mines and Resources, but the rivers and streams—the resort of migratory fish such as salmon and

* Prepared by the respective provincial departments responsible for fisheries administration.

sea trout—are under federal jurisdiction. Matters of conservation and guardianship are therefore mainly or wholly the concern of the federal Department of Fisheries although, to the extent to which they affect the ponds and lakes, they are subject to provincial or joint action.

Prince Edward Island.—The sea and inland fisheries of Prince Edward Island are administered by the Federal Government, and the provincial Department of Fisheries supplements federal activity, which is mainly concerned with inspection and conservation, devoting special attention to the development of the fisheries industry.

The major part of the revenue of the commercial fishermen in the Province is from shellfish, particularly lobster. However, in recent years there has been increased activity in deepsea fishing. Sixty-foot draggers are used for deepsea operations and their catch is landed at filleting and reduction plants on the eastern shores of the Island. Inshore fishing is also carried out extensively, the catch from this type of operation being landed at various points around the coast.

Technical assistance to fishermen and the fisheries industry is provided by the Provincial Department and, through the Fishermen's Loan Board, financial assistance is given for the purchase of boats and engines. Loans of up to 50 p.c. of the cost of such equipment are available.

The streams of the Province, mostly spring-fed and fairly constant in flow, provide very favourable conditions for the reproduction of game fish, of which speckled trout is the most important. Investigations toward the problem of increasing the production of trout of a size attractive to anglers are being conducted by the Fisheries Research Board of Canada at sites provided by the Provincial Department. The necessary dams and the fish required for experimental purposes are provided by the Federal Government. Unfortunately many of the fertile and highly productive ponds of the Province have disappeared but the Provincial Department is actively concerned with damming and restoring them for the enjoyment of the public.

Nova Scotia.—The basic responsibility for the administration of tidal and inland fisheries in Nova Scotia is undertaken by the Federal Government. The Province, however, supplements the activities of this authority through its Department of Trade and Industry. In practice, a system of co-operative effort has been worked out between the two authorities with each free to carry out individual responsibilities and specific programs. Provincial activities fall into three sections: development, administration and research.

Development.—Development activities include engineering services, financial assistance to the fisheries industry generally, and educational services to the fishermen.

Engineering services are related to the design, construction and equipment of boats, vessels and fish processing plants. A marine engineer is employed for these services and for the extension of consultant services to all persons interested in the industry. Financial assistance is extended by way of loans for the construction and modernization of fish processing plants and to fishermen for the acquisition of boats and engines. Where the requirements of large new plants have exceeded the capacity of local authorities the Province has provided such utilities as water lines and rail sidings.

Educational services comprise instruction of fishermen in the care and maintenance of marine engines, in basic navigation and in the mending, design and construction of nets and other fishing gear. Short courses are conducted in the fishing ports by Department-employed instructors during the less active fishing seasons. This program is assisted by grants under the Canadian Vocational Training program of the federal Department of Labour.

Administration.—The Nova Scotia Fisheries Act serves to supplement federal jurisdiction and is administered jointly by the Department of Trade and Industry and the federal Department of Fisheries. The Act requires fish processing plants and fish buyers to obtain annual licences. These are issued by the Department of Trade and Industry

only on the recommendation of inspectors of the federal Department of Fisheries and the certification of the Department of National Health and Welfare as to compliance with standards of construction, operation and sanitation contained in federal regulations.

Information obtained from the licensing activities and other statistics supplied by the federal Department of Fisheries enables the provincial Department of Trade and Industry to handle inquiries about the fisheries industry.

Research.—Provincial fisheries research activities have been confined largely to the inland trout and salmon fisheries. The Department of Trade and Industry has carried out a five-year program of water control on the LaHave River in the interests of salmon preservation and development; has undertaken experiments in fertilization of lakes and in partial poisoning of lakes to reduce the numbers of coarse fish competing with trout for the available food supply; and has conducted some special studies of trout populations and salmon migrations. Research activities of this nature have been continued under the direction of the Nova Scotia Research Foundation.

New Brunswick.—Tidal or sea fisheries in New Brunswick are under the jurisdiction of the Federal Government while inland fisheries are administered jointly by the Federal and Provincial Governments. However, in co-operation with the federal Department of Fisheries, the Provincial Government, through its Department of Industry and Development, assumes certain responsibilities in the development of the commercial fisheries.

Financial assistance, by way of loans, is provided to fishermen for the purchase of boats and engines, and for the construction and expansion of cold storage facilities. Small loans are made available to inshore fishermen for the purchase of lobster and herring boats and larger amounts are granted to offshore fishermen for the building of modern groundfish draggers. Seventy units of from 48 to 72 feet in length are in operation in the Gulf of St. Lawrence and the Bay of Fundy. The Bay of Fundy fleet is being enlarged, with consideration being given to the fact that existing processing facilities are limited. However, an expenditure of \$500,000 is being made on cold storage and processing plants under construction at Beaver Harbour. The processing plant alone will absorb an estimated 5,000,000 lb. of fish annually, a capacity that will increase over the years.

The Provincial Government is experimenting with new fishing equipment and techniques that may assist the inshore fisheries. These experiments are carried out with the technical assistance of the Fisheries Research Board of Canada and with the close co-operation of the fishermen concerned. Educational services are extended to deepsea fishermen by offering them practical instruction in basic navigation, rules of the road, business administration and care of marine diesel engines. Technical assistance is also given by Fisheries Branch personnel to dragger owners, boatbuilders and inshore fishermen.

Quebec.—The Department of Game and Fisheries administers both the sea and the inland fisheries of Quebec. The Department has two divisions—the Division of Maritime Fisheries and the Division of Fish and Game, the latter being charged with the administration of the inland fisheries.

Sea Fisheries.—Quebec is the only province administering its own sea fisheries. For the benefit of producers and fishermen, it provides a system of cold storage plants for the freezing and preservation of fish. Since the erection of the first plant in 1932, the network has grown to 53 plants with a daily freezing capacity of 260 tons of fish and a storage capacity of 17,000,000 lb. These cold storage plants also perform a valuable service to fishermen by providing them with frozen bait. In addition, the Department owns and maintains 115 snow houses (where fish may be chilled before being sent to storage or filleting plants), 40 culling sheds, and two artificial drying plants where 6,000,000 lb. of fish may be processed annually.

The Department maintains a staff of inspectors, fish wardens, technicians and technologists to administer fishery legislation and to assist in the application of new techniques for the expansion of the industry. The central administration is located at Quebec City

with an office at Gaspé for the administration of cold storage plants. Fish inspection is carried out under federal and provincial legislation by provincial inspectors who are vested with additional powers for export purposes by the Federal Government.

Educational work among the fishermen and producers is also conducted by the Department to teach the latest methods of fish preparation and of obtaining high quality products. The new Fisheries Training School at Grande Rivière gives to fishermen of all ages the opportunity of taking free theoretical and practical courses in fishery, and the Superior School of Fisheries at Ste. Anne-de-la-Pocatière conducts a four-year course for technologists. Encouragement is given to the co-operative associations of fishermen through the Social Economic Service of the latter institution. Under a maritime credit system fishermen are able to obtain loans from credit unions for the purchase of boats and gear. The Department adheres to the federal-provincial agreement on the building of draggers and long-liners and assumes the building costs on a five-year capital refunding plan.

The fish trade is being promoted by advertising campaigns in newspapers and magazines, cooking demonstrations, educational films and free distribution of fish recipes and publicity leaflets as well as by exhibits at fairs.

Hydrographical research in the Gulf of St. Lawrence, studies on the location of new fishing grounds, and experiments on seafish biology are conducted by a Marine Biological Station at Grande Rivière and two substations on the North Shore and Magdalen Islands. This research has brought into use new types of fishing vessels recommended to fishermen. The Department also operates a Limnological Laboratory at Quebec City for studying the biology of the freshwater fish of the St. Lawrence River and its tributaries.

Inland Fisheries.—The Division of Fish and Game exercises jurisdiction over the inland waters. Three hundred full-time wardens are employed and licences are required for sport fishing and hunting, the revenue from which is applied to the improvement of fishing and hunting conditions. Five hatcheries are maintained at strategic points throughout the Province: St. Faustin, Lachine, Lac Lyster, Tadoussac and Gaspé. These establishments distribute speckled trout, Atlantic salmon and grey trout fry, maskinonge fingerlings and older fish.

The Department administers five parks and eight reserves in all of which, except for Mount Orford Park, excellent fishing may be found. The Gaspesian and Laurentides Parks are renowned for their trout fishing. The Chibougamau Reserve and the La Vérendrye Park, situated on the height of land, are eminently suited to canoe trips in search of pickerel, pike and grey or speckled trout. Five salmon streams, all under the jurisdiction of the Fish and Game Division, are open to anglers: the Romaine River, the St. Jean River, the Petite Cascapédia River, the Matane River and Port-Daniel River. The Department co-operates with sportsmen through a joint committee composed of departmental officials and the directors of the larger fish and game associations. The committee studies the maintenance of satisfactory fishing and hunting conditions and other problems arising out of the ever-changing conditions of modern life and their effect on the wildlife of the Province.

The Biological Bureau of the Province, located at the University of Montreal, and the piscicultural laboratory at Quebec City, with its two stations for practical work located in the Trembling Mountain and Laurentides Parks, study problems connected with marine life.

Ontario.—The fishery resources of Ontario are administered by the Division of Fish and Wildlife, Department of Lands and Forests. The Division operates under the authority of the Fisheries Act (Canada), the Special Fishery Regulations for the Province of Ontario, the Ontario Game and Fisheries Act and the Regulations connected therewith.

Commercial Fishing.—The commercial fishing industry in Ontario provides employment for about 4,000 persons directly and for many more indirectly, and produces an annual yield of from 35,000,000 lb. to 45,000,000 lb. of fish. The industry, although widely

scattered throughout the Province, is centred chiefly on the Great Lakes, particularly Lake Erie which is noted for its blue and yellow pickerel, white bass, whitefish and perch. Other principal species of fish taken commercially are: lake trout, herring or cisco, sturgeon, pike, catfish (including bullheads), carp and suckers. Over one hundred smaller inland lakes are commercially fished, principally those in the northwestern portion of the Province, and careful management of these lakes is essential to ensure continued production.

The types of fishing boats in use vary from small craft to 60-foot tugs, and types of gear vary from the most common gill-nets, pound-nets and trap-nets, seines and baited hooks to small hand-operated seines and dip-nets. Fishing methods and equipment have been rapidly modernized during the past few years. Diesel driven steel-hull tugs have replaced steam-driven wooden tugs. Such aids as depth sounding devices, radar, ship-to-shore and ship-to-ship communications have been developed and a better knowledge of the fish and their movements has been established from biological research findings. Modern icing facilities and transportation methods are in use as well as new types of fishing gear. Nylon gill-nets have replaced cotton and linen nets and a very efficient and economical trap-net is gradually replacing the pound-net in Lake Erie and other waters.

Excellent co-operation and understanding of the complex problems involved in the administration and management of Ontario's freshwater fishing industry by the Government and the fishermen, through their local associations and the Ontario Council of Commercial Fisheries, is working to the advantage of the industry as a whole.

Angling.—In Ontario with its estimated freshwater area of 78,747 sq. miles, angling constitutes one of the most widely distributed recreations. There are 144 different kinds of fish in the Province including such species as lake, speckled, rainbow and brown trout, yellow pickerel, black bass, pike and maskinonge. It is difficult to measure the value of sport fishing to the Province but the annual revenue from the sale of angling licences alone (mainly to non-residents, as residents require a licence for Provincial Parks only) is in the neighbourhood of \$2,300,000.

To maintain Ontario's reputation for excellent game fishing the wise management of this renewable resource is a prime factor, and a well-trained field staff of conservation officers and biologists is located in the 22 forestry districts of the Province.

Provincial Hatcheries.—Ontario operates 21 hatcheries and rearing stations and excellent results have been produced in the culture and distribution of the various species of commercial and game fish. Hundreds of millions of fry, fingerlings and yearlings, comprising whitefish, herring, pickerel, trout (lake, speckled, brown and Kamloops), maskinonge, bass and ouananiche are distributed annually. Three of the finest trout-rearing stations on this Continent are located in Ontario at Dorion near Port Arthur, at Sault Ste. Marie and at Hill Lake near Englehart.

Fisheries Research.—Research in Ontario is carried on in the Great Lakes where commercial fisheries problems are being investigated, and in inland waters where game fish populations are being studied. At the South Bay Mouth Station, Manitoulin Island, research biologists are conducting studies relating to the removal and utilization of the less valuable species and the effects of this removal on stocks of the more valuable commercial and game species. In Algonquin Park a careful record of angling quality is kept for a number of test lakes to allow evaluation of management techniques. Certain of the more barren lakes are being treated with fertilizer to determine the effect on microscopic organisms and fish.

The habits of lake trout and eastern brook or speckled trout are being studied to provide additional information on the proper management of these species. Many authorities believe the increase in the sea lamprey and the drastic drop in production of lake trout in recent years in Lake Huron (including Georgian Bay and North Channel) to be directly related and this has led to an International Agreement between Canada and the United States and the establishment of the Great Lakes Fisheries Research Commission

for the co-ordination and direction of the fisheries research program, particularly as it is applied to the control of the sea lamprey menace. Co-operation is maintained by the exchange of biological findings and, where practicable and feasible, the results are applied in an attempt to control this menace.

Established fish management principles are applied by biologists in the various forestry districts. The program includes such projects as biological surveys and investigations, bass harvesting, coarse fish removal, creel census studies, fish tagging and other related subjects.

Manitoba.—For the year ended Mar. 31, 1956, the freshwater commercial fisheries of Manitoba, made possible by nearly 39,255 sq. miles of lakes and streams in the Province, yielded a catch of 34,936,600 lb. of choice edible fish, the market value of which was \$6,146,761. Fifteen varieties of fish make up the commercial catch, the most important, according to value, being pickerel, whitefish, sauger, pike and perch. In addition to commercial production, sport fishing yielded a considerable poundage.

The fisheries of Manitoba provide a large harvest of rich protein food about 90 p.c. of which is sold to United States dealers. Actual fishing operations employ over 6,000 men and at least a similar number find total or partial employment in the many industries dependent wholly or in part on the fisheries.

Since the commercial fishing industry began in Manitoba about 75 years ago, equipment has improved and methods of handling fish have changed to meet modern demands for a packaged product ready to serve or convenient to cook. Oars and sail have given way to high powered internal combustion engines and boats that can lift nets in almost any weather. Coarse linen gill-nets have also disappeared in favour of the finest of nylon gill-netting. In marketing, whole fish packed in ice is being replaced, in part at least, with a packaged filleted product, or precooked items. Throughout the fishing industry there is a keen appreciation of the necessity of producing a first quality product, convenient to prepare, attractively packaged, and appealing to the eye, palate and the cook. The city of Winnipeg has become one of the largest freshwater fish marketing centres on the Continent and the provincial Department of Mines and Natural Resources maintains a city patrol service to ensure, as far as is possible, that only fish of first quality is marketed or offered to the consumer. This patrol operates in co-operation with officials of the federal Department of Fisheries. To regulate the fishery operation and to ensure that seasons and limits are observed, the Fisheries Branch of the Provincial Department operates a fleet of patrol boats in summer and a number of bombardier snowmobiles in winter.

Four fish hatcheries are engaged in the artificial propagation of pickerel and whitefish on commercial fishing lakes and a trout hatchery provides a supply of lake, rainbow and speckled trout for sport fishing waters at the northern extremity of West Hawk Lake in Whiteshell Provincial Park.

Saskatchewan.—The fisheries of Saskatchewan are administered by the Fisheries Branch of the provincial Department of Natural Resources with head office at Prince Albert. Most of the fisheries resources are concentrated in the northern half of the Province where the lakes have always been a source of food to the fur traders, trappers, prospectors and the Cree and Chipewyan Indians who inhabit the area; they also provide food and supplementary income to settlers and homesteaders on the agricultural fringe.

There are approximately 135 commercially fished lakes in the Province and the principal species of fish include lake trout, whitefish, pickerel, northern pike, sturgeon, cisco, Arctic grayling, goldeye, mullet, perch and burbot. The growth of the filleting industry has been of particular significance, 12 filleting and 11 packing plants having been established since 1945. The importance of the fishery resources to mink ranchers in the Province is shown by the fact that in the year ended Mar. 31, 1956, 78 fur-farm fishing licences were issued and 43,167 mink were fed under these licences; 722 domestic licences and 1,769 free licences to Indians were also issued.

There has been marked development recently in sport fishing. In the fiscal year 1955-56 there were 78,988 resident and 6,658 non-resident angling licences sold, compared with 6,000 resident and 1,500 non-resident licences sold in 1945.

Emphasis in the fish cultural activities of the Province during the past few years has been on extending the range of the Arctic grayling species from the Far North into the Churchill River area, and on the introduction of eastern brook trout and certain warm water species into areas where preliminary study seems to indicate suitable environment. To a large extent the indiscriminate planting of fish has been discontinued. A new fish culture station is being built at Fort Qu'Appelle for the hatching of pickerel, rainbow, brown and lake trout. Rearing facilities will also be built for the rearing of various types of game trout. An experimental hatchery has been established at Lac la Ronge where Arctic grayling and lake trout eggs have been hatched, an Arctic grayling spawn camp in the Fond-du-lac River near Black Lake, and a pickerel spawn camp on the Montreal River near Lac la Ronge.

The management of the provincial water areas is conducted on a scientific basis. In 1947 a large-scale biological program was undertaken and since then more than 100 water areas have been studied as to their productivity as well as to the interrelationship of the species and their life histories. In so far as known facts permit, the management of the various lakes has been placed on a sustained-yield basis. Experiments are in progress on the introduction of non-native species into suitable water areas. Where sport fishing pressure has increased, such as on Lac la Ronge, Last Mountain Lake and Qu'Appelle Lakes, a creel census has been established and the annual take is recorded. The Fisheries Laboratory, established in 1949 at the University of Saskatchewan, has five permanent biologists on its staff, and usually about 12 students of the University are employed each summer on biological surveys. The Fisheries Branch has conducted a program of education designed to acquaint people of the Province with the importance of scientific research and the necessity of certain regulations governing the administration of fisheries.

Alberta.—Commercial and game fishing are administered by the Fish and Game Branch of the Department of Lands and Forests under the authority of the Fisheries Act (Canada) and the Fishery Act (Alberta).

Regulations under the Fishery Act (Alberta), designed to improve the packing, handling, processing, storage and quality of commercial fish, have been well received and supported by the Alberta industry. In line with a policy for producing good quality fish, lakes in which whitefish are infected with pike-tapeworm and do not meet the quality standard have been closed to commercial fishing.

About 80 p.c. of the whitefish production is exported to the United States. Mink farmers of the Province utilize almost the entire catch of tullibee.

Biological surveys of many lakes and watersheds have provided an opportunity to observe the result of former management policies. These surveys have shown that traditional practices of trout-stream management were inadequate or incorrect. As a consequence, the minimum size limit has been removed on all trout except lake trout and close seasons for trout, pike, walleye and perch have been abolished. A new management plan on the east slope streams of the Rocky Mountains has been extended to include all the forested area. The main streams are continuously open; the smaller streams are opened and closed in alternate years. The trout-rearing facilities are used largely to produce fish for planting in small lakes and reservoirs previously barren of fish. It has been found that such waters produce very fast-growing trout with a satisfactory survival.

British Columbia.—A Fisheries Office was organized in 1901-2 and became very active in fish cultural work, building and operating fish hatcheries and instituting scientific research into various fishery problems. In 1947 the Fisheries Office was superseded by the Department of Fisheries which in turn was superseded in 1957 by the Department of Recreation and Conservation.

Broadly speaking the administrative and regulative jurisdiction over the fisheries of British Columbia rests with the federal authority. When British Columbia entered Confederation in 1871 the Government of Canada undertook to protect, conserve and promote the fisheries of the Province, and one of the important functions of the provincial Department of Fisheries is to observe these activities and to keep the Provincial Government informed through the appropriate Minister.

The ownership of the fisheries in the non-tidal waters is vested in the Crown in the right of the Province, as are the shell fisheries such as oyster fishing and clam fishing in the tidal waters. The Province administers these fisheries although the regulations covering them are made under federal Order in Council on the advice and recommendation of the Province.

The Provincial Fisheries Act provides for the taxation of the fisheries and, under civil and property rights, for the regulation and control of the various fish processing plants under a system of licensing. Provision is also made for arbitration of disputes regarding fish prices that may arise between the fishermen and operators of the various licensed plants. The administration of the Act involves the collection of revenue and the supervision of plant operations.

Net fishing in the non-tidal waters of the Province, including commercial fishing, is regulated and administered by the provincial Department of Fisheries, and authority for regulation of the game fisheries in the non-tidal waters is vested in the Game Commission, a branch of the Provincial Government administration. The Game Commission operates a number of trout hatcheries and egg-taking stations for restocking purposes.

The harvesting of marine plants of commercial importance in British Columbia, including the kelps, has recently been placed under the provincial Department of Fisheries for regulation and control. Some research has been done on a few of the important species and more will be undertaken as required.

The provincial Department of Fisheries established a marine laboratory at Ladysmith on Vancouver Island for the purpose of conducting biological research into those species over which the Province has control, principally oysters, clams and other forms of shellfish as well as marine plants. This research is conducted with the object of encouraging the industry to produce better products more economically and of enabling the Department to regulate the various species so that maximum exploitation may be obtained on a sustained yield basis. The Department co-operates closely with the research work done by the Fisheries Research Board of Canada; particularly on the Pacific Coast.

Section 3.—Fishery Statistics

Subsection 1.—Primary Production

Since Newfoundland became a province of Canada in 1949, the landings of fish in Canada have fluctuated around 2,000,000,000 lb.; a maximum catch of 2,122,000,000 lb. was recorded in 1950. The landed value is generally over \$90,000,000, having reached \$102,000,000 in 1951. Since 1949, the Province of Newfoundland has contributed a yearly average of 588,000,000 lb. and of \$13,500,000. The total Canadian catch of fish in 1955 was 1,917,000,000 lb. valued at \$90,900,000, a decline of 6.5 p.c. in quantity and of 7.6 p.c. in value compared with the preceding year. The decline was most significant in British Columbia, Newfoundland and New Brunswick, freshwater fisheries having recorded a slightly higher level both for quantity and value.

British Columbia's 1955 catch of 498,376,000 lb. valued at \$27,710,600 was considerably lower than that of 1954. The landings of sockeye and chum salmon, at 16,642,000 lb. and 18,178,000 lb., respectively, were disappointing and the low yield of these species was only partially compensated for by the highest yield of pinks since 1930 (831,253 cases of 48 lb.). The total salmon catch was 131,008,000 lb. valued at \$18,481,000 compared with 178,862,000 lb. valued at \$23,578,800 in 1954.

The halibut and herring catches in British Columbia were also low in 1955. Halibut declined to 19,679,000 lb. valued at \$2,555,000 from 25,199,000 lb. and \$3,984,000 in the preceding year and a depressed market for this product was reflected in lower unit returns to fishermen. The landings of herring were 305,692,000 lb. valued at \$4,187,000 in 1955, against 360,962,000 lb. and \$4,565,000 in 1954. The decrease was the result of two principal factors: the 1954-55 winter herring season ended early in February, a month earlier than usual, when schools of herring failed to appear; operators and fishermen failed to reach an agreement on prices for the summer operations and there was no fishing for herring in the summer months. A similar lack of agreement on prices for the 1955-56 winter season delayed the resumption of fishing from the normal early October opening to Nov. 17.

On the Atlantic Coast the yield of the fisheries was satisfactory in 1955. The catch declined by 2.3 p.c. to 1,299,954,000 lb. from 1,330,638,000 lb. in 1954, but the landed value at \$50,057,000 was virtually unchanged from the previous year's level. A small catch of herring in New Brunswick and of cod in Newfoundland accounted for the decline in landings, though increased landings of other species partially offset the loss. Except for a decline in the cod fisheries, the groundfish fisheries were very successful mainly those of haddock, pollock and the small flatfishes—plaice and flounders. There were additions to the dragger fleet in the Gulf of St. Lawrence and offshore fishing out of the Nova Scotia ports was active throughout the year supported by a growing production of frozen fillets. Lobster fishing was also very successful, the 1955 catch being 48,568,000 lb. with a landed value of \$16,470,000 as compared with 46,675,000 lb. valued at \$15,558,000 in the preceding year. Provincial distribution figures indicate a decline in Newfoundland and New Brunswick as compared with 1954 but a rise in Nova Scotia, Quebec and Prince Edward Island.

The harvest of freshwater species in Canada amounted to 118,959,000 lb. in 1955 valued at \$13,125,000, both figures being a record for a great number of years. The Great Lakes fisheries of blue and yellow pickerel were particularly successful, the landings of these two species together being valued at \$4,541,000. However, the most valuable of the freshwater species are whitefish and lake trout. Whitefish is taken commercially in all the inland provinces and the Northwest Territories. Most of the lake trout is from the Great Slave Lake, the Great Lakes or the Saskatchewan waters. However, the whitefish and lake trout catch continued to decline in the Great Lakes in 1955 but they were landed in larger amounts from the Great Slave Lake.

In 1955, 62,511 persons were employed in the primary operations of the sea and freshwater fisheries (Newfoundland excluded), approximately the same as in 1954. No significant change has been recorded in the number of fishermen in the past few years except in Newfoundland. Long-term records for this Province are confined to a count of the cod fishermen, who have gradually come down in number, especially since 1950. The latest figure available of number of fishermen in Newfoundland is for 1954 when 16,469 were reported.

The value of equipment used in the primary operations was \$107,071,000 in 1955 (Newfoundland excluded). This figure refers to investment in vessels of all kinds, boats, fishing gear, shore installations, etc. In recent years, a substantial investment was made in modern long-liners and draggers, especially for the groundfish fisheries. The capital equipment employed in primary operations in Newfoundland was reported at \$17,535,300 for 1954.

1.—Quantity and Value of Sea and Inland Fish Landed by Province 1951-55

NOTE.—Figures for the years 1918-50 are given in previous editions of the Year Book beginning with the 1947 edition.

Province or Territory	1951	1952	1953	1954	1955
QUANTITY					
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland.....	612,460	551,960	502,085	607,413	553,170
Prince Edward Island.....	27,224	32,471	31,944	34,627	35,931
Nova Scotia.....	381,904	392,396	371,049	396,511	425,902
New Brunswick.....	227,038	254,599	197,235	213,294	167,438
Quebec.....	102,119	127,563	113,162	92,545	129,192
Ontario.....	30,969	38,044	44,838	47,680	45,634
Manitoba.....	35,457	31,338	23,358	28,445	34,936
Saskatchewan.....	11,512	10,612	8,481	10,524	10,152
Alberta.....	8,399	9,657	10,839	8,765	8,731
British Columbia.....	621,881	406,452	543,676	602,270	498,376
Northwest Territories.....	7,477	7,042	6,719	7,021	7,827
Totals.....	2,056,440	1,862,134	1,853,387	2,049,095	1,917,289
Sea Fish.....	1,968,081	1,759,205	1,747,171	1,932,908	1,798,330
Inland Fish.....	98,359	102,929	106,216	116,187	118,959
VALUE					
	\$'000	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	13,500	12,928	12,015	14,704	13,662
Prince Edward Island.....	2,240	2,660	2,870	2,948	3,279
Nova Scotia.....	21,398	22,679	21,928	23,046	23,582
New Brunswick.....	7,588	7,825	6,910	7,310	6,753
Quebec.....	3,376	3,572	3,395	2,931	3,453
Ontario.....	7,035	7,417	7,027	7,013	6,783
Manitoba.....	4,263	3,439	2,717	3,088	3,477
Saskatchewan.....	910	679	553	741	763
Alberta.....	544	654	667	667	688
British Columbia.....	40,638	30,158	31,280	34,458	27,711
Northwest Territories.....	535	735	470	636	742
Totals.....	102,927	92,746	89,832	97,542	90,893
Sea Fish.....	88,173	79,280	77,718	84,819	77,768
Inland Fish.....	13,854	13,466	12,114	12,723	13,125

2.—Value of All Products of the Fisheries by Province 1951-55

NOTE.—Figures for the years 1917-50 are given in the corresponding table of previous Year Books beginning with the 1922-23 edition. Totals for five-year intervals from 1870 are given in the 1956 edition, p. 597.

Province or Territory	1951		1952		1953		1954		1955	
	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.
Newfoundland (estimated)	29,000	14	27,500	16	24,000	14	28,000	15	25,000	14
Prince Edward Island.....	3,213	1	3,759	2	4,049	2	3,922	2	3,841	2
Nova Scotia.....	40,314	20	42,435	24	40,048	23	44,079	23	47,093	26
New Brunswick.....	21,155	10	20,504	12	17,749	10	22,161	12	20,420	11
Quebec.....	5,511	3	6,113	3	5,804	3	5,002	3	6,675	4
Ontario.....	7,925	4	8,344	5	7,916	5	7,889	4	7,631	4
Manitoba.....	7,524	4	5,960	3	4,784	3	5,279	3	6,044	3
Saskatchewan.....	1,749	1	1,440	1	1,281	1	1,644	1	1,617	1
Alberta.....	862	-	943	1	1,086	1	1,141	-	1,144	1
British Columbia.....	85,397	42	57,234	32	65,103	37	69,351	36	60,032	33
Yukon.....	—	—	—	—	—	—	—	—	—	—
Northwest Territories.....	2,262	1	2,225	1	1,512	1	2,040	1	1,529	1
Totals.....	204,912	100	176,457	100	173,332	100	190,508	100	181,026	100
Sea Fish.....	184,023	90	157,003	89	156,072	90	171,935	90	162,389	90
Inland Fish.....	20,889	10	19,454	11	17,260	10	18,573	10	18,637	10

VALUES OF ALL PRODUCTS OF THE FISHERIES, 1905-55

(INCLUDES AN ESTIMATE FOR NEWFOUNDLAND STARTING 1951)



3.—Quantity Landed and Value of Products by Selected Species 1951-55

(Excluding Newfoundland)

Areas and Species	Quantity Landed ¹					Value of Products ²				
	1951	1952	1953	1954	1955	1951	1952	1953	1954	1955
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	\$'000	\$'000	\$'000	\$'000	\$'000
Atlantic Coast										
Groundfish.....	374,009	412,563	379,313	407,463	417,447	30,201	31,849	28,316	33,203	35,455
Catfish.....	3,605	4,992	4,981	4,814	4,429	217	372	381	344	334
Cod.....	227,172	238,641	189,298	197,906	202,912	17,009	17,584	13,900	17,999	17,951
Flounders.....	4,478	4,005	3,299	3,206	2,798	381	235	188	190	230
Haddock.....	55,990	54,902	58,480	75,172	83,976	5,144	5,204	5,391	6,588	7,141
Hake.....	22,312	28,380	23,647	20,166	18,438	1,181	1,584	1,186	894	740
Halibut.....	7,755	4,009	4,155	4,650	4,007	2,370	1,484	1,417	1,348	1,214
Plaice.....	25,201	34,318	35,433	30,677	51,799	1,944	2,567	2,523	2,030	3,910
Pollock.....	17,831	28,398	30,403	32,154	38,816	1,250	1,771	1,589	1,862	2,141
Rosefish.....	4,054	7,999	17,629	28,985	26,477	310	502	973	1,414	1,240
Witch.....	1,221	2,459	6,354	4,400	8,246	105	234	523	311	336
Other.....	4,390	4,460	5,634	5,333	5,549	290	312	245	223	218
Pelagic and Estuarial..										
Alewives.....	27,678	38,146	26,003	21,237	18,110	970	1,267	933	879	694
Herring.....	143,451	184,591	150,123	152,708	161,214	5,450	5,800	4,355	4,326	4,842
Mackerel.....	24,742	21,992	18,461	25,512	24,862	2,112	1,889	1,490	1,899	2,030
Salmon.....	1,764	1,696	1,594	1,601	892	951	1,073	959	1,038	845
Sardines.....	64,805	54,542	37,212	33,165	11,036	5,654	4,584	3,244	5,501	2,982
Smelts.....	6,337	4,031	6,305	4,622	6,084	1,313	980	1,215	815	1,019
Swordfish.....	2,544	3,156	3,324	4,298	4,546	1,114	1,076	1,183	1,245	1,431
Other.....	6,131	5,243	5,964	4,683	5,494	403	406	309	278	332

For footnotes, see end of table, p. 610.

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3.—Quantity Landed and Value of Products by Selected Species 1951-55—concluded

Areas and Species	Quantity Landed ¹					Value of Products ²				
	1951	1952	1953	1954	1955	1951	1952	1953	1954	1955
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	\$'000	\$'000	\$'000	\$'000	\$'000
Molluscs and Crustaceans	71,376	71,138	67,758	60,511	60,429	19,603	21,616	22,466	22,375	24,375
Clams—										
Quahaugs.....	1,147	2,672	4,670	3,456	791	51	140	281	203	59
Soft-shelled.....	15,977	12,336	9,651	7,326	6,897	1,046	1,208	831	861	758
Lobsters.....	45,573	44,133	41,920	41,433	43,060	17,569	18,634	19,719	19,956	21,916
Oysters.....	6,885	7,892	8,159	5,001	6,244	514	581	630	449	545
Scallops.....	599	1,114	1,601	1,541	1,635	331	727	795	729	966
Other.....	1,195	2,991	1,757	1,754	1,802	92	326	210	177	131
Other.....	...	...	...	...	...	1,855	1,728	2,499	3,025	3,351
Totals, Atlantic Coast.....	...	...	...	...	...	69,626	72,268	66,969	74,584	77,356
Pacific Coast										
Groundfish	43,777	49,471	39,199	41,513	35,766	8,894	8,726	7,658	8,102	6,123
Cod.....	5,267	4,510	3,191	4,973	3,464	454	521	252	467	445
Halibut.....	20,214	23,488	24,882	25,109	19,679	5,762	5,672	5,721	5,965	3,924
Lingcod.....	4,746	4,242	2,943	3,907	3,625	826	590	383	487	399
Sablefish.....	1,897	1,346	1,364	1,128	1,215	501	310	313	257	265
Soles.....	10,129	14,412	6,138	5,428	6,993	1,188	1,533	854	461	710
Other.....	1,524	1,473	681	878	790	163	100	135	465	380
Pelagic and Estuarial	564,861	339,535	489,035	543,288	444,522	73,507	46,629	55,553	59,099	51,378
Herring.....	365,432	189,497	298,241	360,962	305,692	10,640	4,235	6,519	7,340	7,636
Salmon.....	197,594	146,965	186,914	178,862	131,008	60,750	40,495	47,936	50,284	42,625
Chum.....	63,491	31,862	54,425	74,399	18,178	12,185	4,786	8,436	11,965	3,749
Coho.....	32,211	19,608	21,105	18,928	21,534	12,609	5,180	5,844	6,335	8,632
Pink.....	60,012	51,249	61,512	25,734	63,106	14,920	11,088	12,540	6,058	15,953
Sockeye.....	29,815	30,867	35,337	47,001	16,642	16,085	14,781	16,111	21,200	9,343
Spring.....	11,657	12,870	14,072	12,238	11,306	4,184	4,174	4,216	3,781	4,250
Other.....	408	509	463	562	242	767	486	789	945	698
Tuna.....	190	157	11	--	--	1,657	1,517	808	1,273	980
Other.....	1,645	2,910	3,869	3,464	7,822	460	382	290	202	137
Molluscs and Crustaceans	11,576	15,993	14,047	15,370	16,915	1,230	1,623	1,786	1,955	2,141
Clams—										
Butter, little neck, razor, etc.....	4,500	6,661	4,586	3,776	4,944	383	476	449	306	436
Crabs.....	1,802	1,999	3,193	4,188	4,514	403	475	663	879	996
Oysters.....	4,716	6,494	4,986	6,440	6,361	290	438	304	470	420
Shrimps and prawns.....	545	825	1,259	951	1,088	149	227	361	290	282
Other.....	13	14	23	15	8	5	7	9	11	7
Other.....	...	...	...	...	...	517	256	106	195	390
Totals, Pacific Coast.....	...	...	...	...	...	84,148	57,234	65,103	69,351	60,032
Inland										
Freshwater Fish	95,753	97,852	94,993	102,349	106,396	20,708	19,129	16,847	18,170	18,133
Bass.....	1,456	2,201	6,205	4,589	3	326	326	322	420	515
Catfish.....	1,776	1,968	1,938	1,676	1,535	326	370	313	258	246
Herring, lake (cisco).....	1,428	1,598	1,148	1,376	935	227	219	156	164	78
Perch.....	4,465	4,158	5,720	8,982	6,765	1,054	780	639	825	942
Pickarel (blue).....	4,102	7,447	10,399	8,210	12,070	919	1,181	1,171	1,355	1,629
Pickarel (yellow).....	17,073	16,606	15,974	16,759	19,739	4,778	4,143	3,708	3,784	4,364
Pike.....	7,238	6,635	5,389	5,930	6,960	822	602	539	501	793
Saugers.....	4,958	4,657	2,661	2,734	4,423	1,168	822	464	575	803
Sturgeon.....	372	307	476	400	392	300	234	379	271	325
Trout.....	6,491	6,588	5,658	5,945	6,011	1,908	2,069	1,569	1,712	1,452
Tullibee.....	9,588	8,825	8,922	8,234	9,231	666	493	555	583	571
Whitefish.....	26,505	27,895	25,571	24,577	21,990	7,640	7,295	6,502	7,032	5,870
Other.....	11,757	9,712	8,936	11,321	11,756	900	595	530	570	545
Other	2,601	5,072	11,223	13,838	12,563	181	325	413	402	503
Totals, Inland	98,354	102,924	106,216	116,187	118,959	20,889	19,454	17,260	18,572	18,636
Grand Totals.....	...	...	...	...	...	174,663	148,956	149,332	162,507	156,024

¹ Excludes livers.² Includes value of livers and liver products.³ Included in "Other".

4.—Capital Investment in Primary Sea and Inland Fisheries Operations 1953-55

(Excluding Newfoundland)

Kind of Equipment	1953		1954		1955	
	No.	\$'000	No.	\$'000	No.	\$'000
Sea Fisheries.....	...	91,443	...	99,707	...	92,618
Trawlers.....	20	4,227	21	3,985	35	4,479
Vessels—gasoline, diesel and sail.....	2,255	33,535	2,268	34,999	2,338	36,523
Boats—gasoline, diesel, sail and row.....	26,533	26,333	26,262	24,633	25,504	22,977
Packers, carrying boats and scows.....	663	1,374	1,054	1,483	807	1,465
Herring gill-nets.....	40,708	1,092	43,695	1,132	41,134	1,067
Mackerel nets.....	25,503	765	25,041	757	22,988	736
Salmon nets, traps and seines.....	...	4,842	...	4,748	...	5,077
Smelt nets.....	15,790	650	13,550	536	11,838	553
Other nets, weirs and seines.....	...	3,400	...	3,418	...	3,784
Tubs of trawl, skates of gear, hand-lines.....	...	1,340	...	1,235	...	1,151
Lobster traps and pounds.....	1,970,387	7,837	2,011,641	7,849	2,031,587	8,231
Other gear.....	...	816	...	850	...	800
Premises—piers, wharves, freezers, ice-houses, small fish- and smoke-houses.....	...	5,232	...	5,082	...	5,175
Inland Fisheries.....	...	14,725	...	15,842	...	15,053
Carrying boats.....	82	481	77	526	105	548
Boats, (gasoline) skiffs, canoes.....	6,826	4,570	6,826	5,078	6,355	4,775
Gill-nets.....	225,547	5,022	246,254	5,421	238,703	5,280
Other nets, weirs and seines.....	...	1,313	...	1,340	...	1,391
Other gear.....	...	81	...	81	...	95
Premises—piers, wharves, freezers, ice-houses, small fish- and smoke-houses.....	...	2,355	...	2,343	...	2,451
Other equipment—fish tanks, bombardiers, trucks, snowmobiles, aircraft, etc.....	...	903	...	1,103	...	513
Grand Totals.....	...	106,168	...	106,549	...	107,071

5.—Persons Employed in the Primary Fishing Industry 1953-55

(Excluding Newfoundland)

Persons Employed in—	Sea Fisheries			Inland Fisheries		
	1953	1954	1955 ¹	1953	1954	1955
	No.	No.	No.	No.	No.	No.
Trawlers.....	476	462	442	—	—	—
Dragners ²	720	832	886	—	—	—
Vessels.....	8,002	8,079	3,994	—	—	—
Boats.....	33,258	33,297	24,156	9,600	10,582	9,879
Packers, carrying boats and scows.....	1,117	610	526	132	172	202
Fishing, not in boats.....	2,270	1,770	1,861	8,100	7,458	7,729
Totals, Employed	45,843	45,050	44,701	17,832	18,212	17,810

¹ Classification of craft not available for British Columbia; total of 12,836 included for this Province in sea fisheries total.

² British Columbia dragners included with vessels for 1953 and 1954.

Subsection 2.—The Fish Processing Industry

The Census of Industry survey of the fish processing industry covers establishments engaged in the processing of fish at the secondary industrial level. Some fishermen also process the fish they land to a certain degree but their operations are not included; neither are the inland areas (Ontario, Prairie Provinces, Yukon Territory and the Northwest Territories) although some fish processing is done there. Summary statistics of sea fish processing establishments are shown in Table 6.

6.—Summary Statistics of Sea Fish Processing Establishments 1951-55

Item		1951	1952	1953	1954	1955
Establishments	No.	633	635	607	586	574
Newfoundland.....	"	38	40	35	29	34
Prince Edward Island.....	"	55	54	47	41	36
Nova Scotia.....	"	203	198	199	184	194
New Brunswick.....	"	178	176	167	166	167
Quebec.....	"	96	89	82	84	71
British Columbia.....	"	63	78	77	82	72
Employees	No.	14,911	14,354	13,623	14,202	14,626
Male.....	"	10,698	10,329	9,833	10,225	10,283
Female.....	"	4,213	4,025	3,790	3,977	4,343
Salaries and wages.....	\$'000	24,744	24,426	23,092	26,001	26,320
Fuel and electricity used.....	"	2,724	2,533	2,410	2,605	2,663
Materials used.....	"	101,621	86,458	85,908	95,633	101,921
Value of products.....	"	163,010	134,725	137,310	153,457	159,888

The most important species to the industry in point of value is the salmon, followed by cod, herring, haddock, lobster, plaice and sardines. The products of these species made up over 60 p.c. of the total value of output of the industry in 1955, as shown in Table 7.

7.—Principal Products of the Sea Fish Processing Industry by Quantity and Marketed Value 1954 and 1955

Product		1954		1955	
		Quantity	Value	Quantity	Value
			\$'000		\$'000
Salmon.....		...	49,089.2	...	33,991.1
Canned.....	cases	1,742,786	38,403.7	1,407,533	32,567.4
Frozen fillets.....	'000 lb.	1,440	593.3	810	343.3
Mild-cured.....	"	506	248.6	586	328.9
Ofal meal.....	ton	2,111	251.3	1,654	232.7
Smoked and kippered.....	'000 lb.	226	100.0	268	133.7
Ofal oil.....	"	1,149	80.9	1,554	128.0
Pickled.....	bbl.	233	18.4	229	18.5
Other.....	...	...	393.0	...	238.6
Cod.....		...	23,742.1	...	25,297.8
Frozen fillets.....	'000 lb.	30,159	5,755.0	39,847	7,410.4
Dried, salted.....	"	28,790	4,606.0	32,869	4,765.4
Blocks and sticks.....	"	15,148	3,341.0	18,800	3,601.3
Green-salted.....	"	22,285	1,671.0	29,783	2,541.7
Fresh fillets.....	"	16,372	2,940.9	12,798	2,346.5
Boneless, salted.....	"	7,424	1,885.4	6,739	1,734.8
Smoked fillets.....	"	5,327	1,276.5	4,776	1,016.5
Body meal.....	ton	6,111	784.6	14,955	864.2
Destearinated medicinal liver oil.....	gal.	39,090	83.0	314,989	499.4
Other.....	...	...	1,398.7	...	517.6
Herring.....		...	9,935.8	...	10,859.1
Meal.....	ton	33,018	4,747.1	30,313	4,733.0
Oil, industrial.....	'000 lb.	30,080	2,394.3	28,668	2,461.0
Smoked, bloaters.....	"	10,617	886.2	12,583	839.4
Vinegar-cured fillets.....	bbl.	20,762	419.9	24,605	551.0
Canned, round.....	cases	28,353	216.2	52,767	421.4
Kipperd.....	'000 lb.	1,192	220.0	2,143	326.7
Canned, kippered snacks.....	cases	8,257	171.9	42,276	309.6
Vinegar-cured, round.....	bbl.	11,798	186.1	15,985	271.7
Pickled.....	"	22,936	263.7	13,278	210.8
Smoked, boneless.....	'000 lb.	671	85.8	462	102.3
Other.....	...	...	344.6	...	632.2

7.—Principal Products of the Sea Fish Processing Industry by Quantity and Marketed Value 1954 and 1955—concluded

Product		1954		1955	
		Quantity	Value	Quantity	Value
			\$'000		\$'000
Haddock			7,597.1		9,753.6
Frozen fillets.....	'000 lb.	15,690	3,473.2	20,109	4,120.1
Blocks and sticks.....	"	7,105	1,609.4	16,977	3,382.3
Fresh fillets.....	"	9,618	2,333.4	7,544	1,952.9
Smoked, whole.....	"	635	163.2	770	196.4
Other.....	...	...	17.9	...	101.9
Lobster			7,460.9		8,147.4
Meat.....	'000 lb.	2,032	3,473.1	3,536	5,588.2
Canned.....	cases	90,188	3,843.0	39,398	2,392.5
Other.....	...	...	144.8	...	166.7
Small Flat fishes¹	'000 lb.	12,606	3,427.9	29,855	6,102.7
Frozen fillets.....	"	3,617	1,002.6	3,888	1,149.7
Fresh fillets.....	"	8,989	2,425.3	16,967	4,953.0
Sardines, canned	cases	831,855	5,447.9	449,392	2,960.0

¹ Represents a homogeneous product.

In 1955 the output of fishery products and by-products in Canada at \$181,026,000 was slightly higher than the average for the previous five years but lower by 5 p.c. than in 1954. This drop was attributed to a smaller salmon pack and to unfavourable marketing conditions for halibut in British Columbia. On the East Coast, a smaller pack of canned sardines in New Brunswick and a drop in dried fish production in Newfoundland was compensated for by increased marketings of lobsters and groundfish fillets. The lobster fishery with its high market value is still of great importance to the Maritimes. In recent years there has been a diversion from canned production of this product to fresh or frozen meat. The growth in the production of frozen groundfish fillets is also a major development. Considerable plant expansion took place during 1955, particularly in Newfoundland.

8.—Atlantic Coast Production of Frozen Fillets 1951-55
(Includes fish blocks)

Area and Species	1951	1952	1953	1954	1955
	QUANTITY				
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Maritimes	30,555	49,488	36,590	55,189	58,455
Cod.....	14,075	19,270	12,998	22,812	18,870
Haddock.....	7,445	8,901	10,731	16,487	19,080
Rosefish.....	878	1,894	4,827	7,091	6,771
Flatfish.....	6,613	8,293	6,080	7,143	11,863
Other.....	1,544	2,130	1,864	1,656	1,871
Quebec	1,019	1,706	792	1,824	4,099
Cod.....	966	1,560	688	1,645	2,952
Other.....	53	146	104	179	1,147
Newfoundland	32,689	36,855	34,552	53,326	58,900
Cod.....	16,902	20,566	17,220	31,362	33,457
Haddock.....	2,021	3,563	5,195	13,663	16,492
Rosefish.....	9,659	8,716	8,023	5,622	4,830
Flatfish.....	3,987	3,732	4,014	2,487	3,983
Other.....	120	278	95	192	138
Totals, Atlantic Coast	64,263	79,049	71,844	110,339	121,454
Cod.....	31,943	41,396	30,906	55,819	55,279
Haddock.....	9,466	12,466	15,926	30,150	35,715
Rosefish.....	10,537	10,643	12,855	12,713	11,833
Flatfish.....	10,653	12,136	10,094	9,630	16,532
Other.....	1,664	2,408	2,063	2,027	2,095

8.—Atlantic Coast Production of Frozen Fillets 1951-55—concluded

Area and Species	1951	1952	1953	1954	1955
	VALUE				
	\$'000	\$'000	\$'000	\$'000	\$'000
Maritimes	6,842	9,287	7,948	12,079	13,041
Cod.....	2,442	3,561	2,215	4,509	3,728
Haddock.....	1,776	2,273	2,541	3,915	4,324
Rosefish.....	193	471	948	1,380	1,198
Flatfish.....	2,208	2,583	1,831	1,870	3,405
Other.....	223	399	413	405	386
Quebec	186	269	120	217	765
Cod.....	168	234	96	174	496
Other.....	18	35	24	43	269
Newfoundland¹	7,006	7,845	6,894	10,852	11,442
Cod.....	2,932	3,880	2,970	6,009	6,039
Haddock.....	482	900	1,149	3,009	3,257
Rosefish.....	2,243	1,850	1,621	1,131	888
Flatfish.....	1,331	1,175	1,141	661	1,180
Other.....	18	40	13	42	28
Totals, Atlantic Coast	14,034	17,401	14,962	23,148	25,248
Cod.....	5,542	7,675	5,281	10,692	10,313
Haddock.....	2,258	3,174	3,690	6,924	7,611
Rosefish.....	2,436	2,327	2,569	2,511	2,119
Flatfish.....	3,557	3,786	2,972	2,531	4,779
Other.....	241	439	450	490	426

¹ Value based on average export prices for respective years.

CHAPTER XIV.—FURS

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Section 1.—The Fur Industry

The fur industry, at one time the most vigorous and remunerative industry in Canada, still contributes many millions of dollars annually to the national income. Until the end of the 19th century practically all Canadian furs were wild-caught and, although fur farming has since developed rapidly, trapping still provides about half of the income from raw furs produced in Canada.

Wild fur-bearers are still taken, even in settled areas of this country, but the populations of such animals have in general been so reduced by the advance of settlement that the principal trapping areas now lie in the northern parts of the provinces and the Northwest Territories. Many wild animals, including some important fur-bearers, are subject to marked fluctuations in numbers from year to year. These fluctuations are often greatest and most nearly regular in northern regions and notably affect the number of pelts taken of certain wild species.

Another and perhaps more important factor governing the 'take' of furs from wildlife is the fluctuation in demand and in price consequent on changes in fashion. Thus the vogue of recent years for short-haired furs has caused a decrease in demand for fox and other long-haired pelts and a corresponding decrease in the number of such pelts taken by trappers. In areas such as parts of the Northwest Territories where these furs were formerly a staple source of income, this style change has resulted in serious hardship.

The most important aspects of management of the fur trapping industry are: constant practical scientific research, maintenance of suitable habitat, sound and balanced regulation of the trapping of fur-bearers, provision of competent and adequate field staffs, and free education of trappers with respect to the principles of wildlife management. By these means many areas depleted of fur-bearers have once again become productive. Such means will become increasingly important in maintaining Canada's position as a major producer of raw furs.

Most of the fur resources of the provinces of Canada are under the administration of the respective provincial governments. Exceptions include those resources within the boundaries of the National Parks and the Indian reserves, and the fur resources of the Yukon Territory and Northwest Territories all of which are under the administration of the Federal Government. The Canadian Wildlife Service of the Department of Northern Affairs and National Resources (*see pp. 27-30*) is responsible for all Federal Government interests in wildlife resources except for those activities closely related to Indian affairs. The Service co-operates with provincial governments and other agencies concerned and handles federal interests in relevant national and international problems.

Section 2.—Provincial and Territorial Fur Resources and Management*

Newfoundland.—Only a very small portion of the wild fur resources of Newfoundland is being utilized at present. Trapping is confined to areas in the vicinity of settlements and the operation of traplines is no longer practised in remote areas, which formerly provided the best pelts and the bulk of the fur harvest. This situation arises from the fact that other employment has become available to trappers. Steady income has raised their standard of living to such an extent that they can no longer depend on an occupation which fluctuates so drastically in both supply and market value. Thus no section of the population is now wholly or even partially dependent upon fur trapping for a livelihood and much of the wild fur crop remains unharvested.

Beaver offers the best basis for a revived fur industry within the Province but under present conditions there are not sufficient trappers to harvest the numbers required by managed fur resources.

Open seasons are declared annually upon such species as beaver, otter, muskrat, marten and mink, while hunting of fox and lynx is permitted throughout the year. These latter species have not been harvested to any extent in recent years and are now better known for their predation upon other species and upon livestock than for their fur.

The total value of wild furs produced decreased from \$360,000 in 1949-50 to \$158,000 in 1955-56, with a further decline in prospect if depressed prices for long-haired furs continue.

Prince Edward Island.—Wild fur-bearing animals are very plentiful on Prince Edward Island. Red fox, skunk and raccoon have become so numerous that all protection has been removed and bounties are paid on all three species. Beaver also have increased greatly but may be trapped only by permit secured from the Department of Industry and Natural Resources. There is no open season on beaver.

Ten years ago muskrats had become quite scarce but their population has increased and, being so easily trapped, they are now the best revenue producers. More than 3,000 of them are taken annually. Their increase is attributed largely to the shortening of the trapping season (now from Nov. 10 to Dec. 31) and to the strict enforcement of trapping regulations, which prohibit the setting of traps within ten feet of a muskrat house or den or the damaging of it. Mink are also increasing in number and are protected by a short trapping season. Mink is the only fur-bearing animal ranched to any extent in the Province.

Nova Scotia.—Nova Scotia is not a large producer of wild fur pelts. Trapping is seldom a full-time occupation but is a source of additional income to guides, woodworkers and farmers who live near fur-producing areas. There is usually a six-week open season (Nov. 1 to Dec. 31) for mink, otter, weasel and muskrat. The present low market prices for long-haired fur has discouraged the trapping of wildcat, fox and raccoon and these animals have been removed from the protected list. No licence is required for the trapping of fur-bearers other than beaver.

Since 1931 the Department of Lands and Forests has been redistributing live beaver which before that time had been almost completely trapped out. Today, beaver is an important part of the trappers' catch in most of the counties of the mainland, where an autumn season has been instituted. A few live beaver have also been introduced into Cape Breton Island but no open seasons have been proclaimed.

The red squirrel has also become important as a fur-bearer and in 1954 the laws were changed to permit trapping during the regular season and shooting during the rabbit season which lasts until the end of February.

* Provincial information received from the respective provincial governments and that for the Yukon and Northwest Territories from the Northern Administration and Lands Branch of the Department of Northern Affairs and National Resources, Ottawa.

Exports of wild fur for the year ended Mar. 31, 1955, included: 31,945 deer hides, and pelts of 4,445 beaver, 485 fox, 20 lynx, 2,857 mink, 40,441 muskrat, 212 otter, 1,253 raccoon, 41,757 red squirrel, 3,771 weasel and 178 wildcat.

Quebec.—Fur from wildlife is still a very important asset of the Province of Quebec despite the invasion of the forest for industrial purposes.

The number of pelts taken in the 1955-56 season was 254,138 including: muskrat 141,511, weasel 22,433, squirrel 16,918, beaver 36,302, white fox 3,042, mink 12,019, seal 8,289, red fox 3,325, otter 2,749, raccoon 2,394, lynx 1,469, fisher 1,401, marten 1,273, cross fox 234, skunk 276, blue fox 53, bear 221; and a few pelts of the other types of foxes, lynx cat, polar bear and wolf. The tax rate per pelt varies from one cent on squirrel to \$1 on fisher. The royalties revenue to the Province on the total take of furs in 1955-56 was \$73,096.

The fur resources of Quebec are administered by the Department of Game and Fisheries. Under the game laws and regulations it is unlawful to hunt, catch or trap fur-bearing animals out of season, or in season without a licence; to use poison to hunt or kill any animals; to destroy or damage lairs or burrows of fur-bearing animals; or to keep in captivity, without special permit, any game protected by law. Regulations also cover the marketing of furs. It is not permissible to buy or sell any fur or pelt for commercial purposes without a licence; neither is it permissible to ship any fur outside the Province, or from one place to another within the Province, or to a tanner, without a permit attached to the bill of lading or without royalty having been paid and each pelt stamped or sealed.

By Order in Council of Aug. 17, 1945, the first registered game territory for trappers was set up by the Provincial Government in the Counties of East Abitibi and West Abitibi. In 1946 the County of Pontiac was organized, in 1947 the County of Temiskaming and in 1952 the northern part of the County of Lavolette.

Regulations provide mainly that the land under lease must not exceed 50 sq. miles. The lessee, who pays an annual rental of \$10, is responsible for his own land which he must occupy 15 days before the opening of the trapping season and evacuate 15 days after its close. Each year he must make an inventory of his land and report on the location of the beaver huts thereon. He must hold a special permit to hunt beaver and must prove that there are at least five huts on his land. The quota allowed at the outset is one beaver per hut; as the population increases, the quota is raised to 1½ beavers per hut. Beaver pelts must be specially labelled before marketing. The present registered game territory extends over 30,000 sq. miles. More than 400 trappers hold permits for the capture of beaver. In addition, the Fur Service of the Department of Fish and Game administers 320,000 sq. miles of beaver preserves where Indians enjoy free trapping rights.

Steps are being taken also to assist in the re-establishment of marten, the population of which has been steadily decreasing.

Ontario.—The fur and big game wealth of Ontario is administered by the Division of Fish and Wildlife, Ontario Department of Lands and Forests, under the authority of the Ontario Game and Fisheries Act, the Wolf and Bear Bounty Act, and regulations thereunder.

In the production of wild-caught fur, Ontario leads all other Canadian provinces. In the 1955-56 season wild fur taken in Ontario was valued at almost \$3,000,000 and included pelts of 113,200 beaver valued at \$1,386,700. Other important species in order of decreasing total value were mink, muskrat, otter, fisher, raccoon, weasel, marten, red fox and lynx.

The high production of wild fur in this Province is attributed to the efficient system of fur management now in effect. Throughout most of the chief fur-producing areas all trappers—the majority of whom are Indians—are holders of registered trapline licences. Each trapper is registered with the Province as the sole permittee on a defined trapping area. Thus competitive trapping has been almost entirely eliminated in all but the primarily agricultural areas and the Department is in a position to set quotas to restrict the annual

take of the less abundant species during times of scarcity. Beaver, marten, fisher and lynx, comparatively rare in the Province a few years ago, have now attained populations which permit larger annual harvests to be taken than have been possible for many years.

Big Game.—A long season for moose in Ontario provides sport for hunters and meat for trappers. In most parts of the Province moose of any age or sex are legal game for the resident. In 1955 there were 8,959 resident moose licences sold and 1,141 non-resident licences; there was a known kill of 2,381 moose, made up of 1,354 bulls, 771 cows, 245 calves, and 11 unspecified.

Over 100,000 deer licences were sold in 1955 and about 30 p.c. of the hunters were successful in getting a deer. There is no open season on woodland caribou at present.

Manitoba.—In Manitoba, fur production and value showed a sharp decrease in 1955-56 as compared with the previous year. Furs taken from the wild were valued at \$2,239,892 as compared with the 1954-55 total of \$2,969,804, a decline of almost 25 p.c.

Registered traplines were extended into the southern portions of the Province and into a large area of the western portion around Swan River including the Duck Mountain Forest Reserve. Beaver is the major fur animal taken and beaver pelts from the registered trapline districts were valued at \$219,343 in 1954-55 as compared with \$152,400 in the previous year.

Wild fur production by species during 1955-56 included: 27,213 beaver, 15,708 mink, 1,301,972 muskrat, 123,237 squirrel, 95,119 weasel and 2,069 fox (silver, blue, cross, white and red).

The fur-ranching industry had a record production in 1955-56 of \$3,847,827, considerably exceeding the value of wild fur taken.

Saskatchewan.—Unethical practices and lack of management brought beaver to virtual extinction in Saskatchewan by 1944 and the trapping industry in general had reached a low ebb. The Government in 1945 appointed a committee to recommend what steps might be taken to encourage and assist persons dependent on fish and game for their livelihood, particularly in isolated northern areas. As a result the wildlife fur industry in Saskatchewan has been completely reorganized during the past ten years. The system of allowing only one trapper for a given area, inaugurated throughout the Province, is providing security for trappers on their traplines.

A Fur Marketing Service was established in Regina to give fur-producers a local auction where furs could be graded, displayed and sold. A Fur Conservation Agreement was concluded in 1946 whereby the Federal Government and the Government of Saskatchewan agreed to make certain annual expenditures for the purpose of managing fur and game and improving wildlife habitat in the northern isolated areas for the benefit of the residents of those areas. The particular interest of the Federal Government in this region is the welfare of Treaty Indians who are its wards. Regulations under the Agreement gave Indians, métis, and whites equal rights and security on their community, family or individual traplines. Local councils were elected by the trappers to act as spokesmen on their behalf when dealing with the provincial Department of Natural Resources. During the subsequent five years, 3,600 live beaver were moved from settled areas to new homes in the northern frontier where they were required for propagation purposes and for the improvement and maintenance of water levels. The result of this action has been a steady increase in the population of beaver, while the take has increased from approximately 400 pelts in 1943-44 to 41,666 in 1955-56.

A muskrat trapping program was inaugurated in southern Saskatchewan in 1946 under which each trapper in settled areas obtains a permit describing the area in which he is authorized to trap muskrats. General close seasons are a thing of the past and muskrats existing in any section may be trapped on the basis of the program. Average yearly production since 1946 has been almost tripled in relation to the average production for a similar earlier period. The 1955 crop of about 1,951,800 muskrats was the highest ever recorded in the Province; 1956 production was 1,731,978 pelts.

Other fur-bearers of economic importance are fisher, fox, lynx, marten, mink, otter, squirrel and rabbit. These animals have fluctuated in population and pelt value in the past but the increased production of beaver and muskrat has helped stabilize the income of the trapper. Most fur prices have declined in recent years, but the income received from Saskatchewan wildlife fur pelts has been maintained.

Badger, raccoon and wolverine are of little economic importance at present. Wolves, coyotes and foxes are on the predator list in settled areas and very comprehensive programs of control have been carried on to reduce the population of these animals. A paid hunter program has been in operation since 1948 to reduce the coyote population and these animals are no longer a problem in settled areas. In the autumn of 1954 the bounty on wolves was discontinued. Bait treated with poison, placed out on large lakes in isolated areas, is the present method of controlling wolves but only employees of the Department are allowed to handle the poison. This work is becoming increasingly important not only to protect game that is necessary to the welfare of people living in the north country but also to reduce the chances of spreading the rabies epidemic which has been apparent in the West during the past few years as well as hydatid disease which has been found in some species of big game.

The weasel is a valuable fur-bearer as well as a controller of rodents. Closure in large areas does not seem to increase the weasel population and the policy is now to hold a short autumn and early winter season in all areas where the normal winter season is not in effect. This gives the farm boys and others an opportunity to take some of these valuable fur-bearers.

The jack-rabbit is gaining in importance in recent years—approximately 100,000 were taken in 1956. The average price received for them was 58 cents.

Alberta.—The fur trade in Alberta has shown a steady decline over the past four or five years mainly because of the poor market for long-haired furs. There is practically no sale for pelts of such animals as coyotes, wolves, foxes, badgers and skunks and little for lynx and wolverine. Demand today is for squirrel, muskrat, ermine, mink and beaver in approximately that order of importance. There was a slight decline in fur prices during the fur season ended June 30, 1956, as compared with those obtained during the previous fur season. In 1956, beaver pelts sold at an average price of \$10.45 and muskrats at 91 cents per pelt compared with \$13.08 for beaver and 99 cents for muskrat in 1955.

The trapping industry has changed considerably in recent years. About 3,000 registered trappers operating registered traplines formerly provided the major part of the take. But the trapping of fur-bearing animals by owners and occupants of privately owned lands is becoming more prominent, especially of beaver and muskrat. In fact about 50 p.c. of the beaver trapped in Alberta now come from privately owned land, such trapping being permitted under a resident trapper's licence. Another noteworthy change is the gradual replacement of white trappers operating registered traplines by Indians and métis, who now make up nearly 43 p.c. of the total as compared with 30 p.c. three years ago; of the 2,800 registered trappers now operating, 1,200 are Indians.

In connection with the destroying of predators, it has been found that the paid hunter system gives better returns for the money invested than the old system of bounty payment. Bounties are now paid on cougars only, although certain well-equipped cougar hunters receive an additional \$25 from the Province for each cougar taken.

In 1956, the Game Regulations were changed to afford some protection for black and brown bear. These animals are now protected at all times except during the regular big game season.

The Wild Life Resources of Alberta are administered by the Fish and Game Branch of the Department of Lands and Forests under the supervision of a Fish and Game Commissioner.

British Columbia.—In 1926, effective control of fur-bearing animals in British Columbia commenced and a registered trapline system went into effect. Under this system registered trappers are granted exclusive rights over designated areas. Each is given a sketch map and legal description of the territory and is required to submit an annual 'return of catch' outlining the amount and kind of fur obtained. These returns provide an accurate check of the fur taken from each district. The system of registered traplines has worked remarkably well and is practically trouble-free.

Registered traplines cover all lands except private property, National Parks, Indian reserves, municipalities and certain other reserved areas. Trapping on private property may be pursued by the property owner himself or by someone to whom the owner has given permission, provided the trapper obtains a Special Firearms Licence which costs \$10 and which must be held by all trappers; this licence entitles the legal holder to hunt all types of large and small game. In 1955, 2,798 such licences were granted. In addition, about 1,500 Indians were engaged in trapping; because they are not required to be licensed at present, their take is not recorded and the fur records for the Province are incomplete to that extent.

Fur-bearers in the Province include bear, badger, beaver, fisher, fox, lynx, marten, mink, muskrat, otter, raccoon, skunk, squirrel, weasel and wolverine. Wolf, coyote, cougar and wildcat are classed as predators although the pelts of these animals are sometimes marketable. There is no close season on the predators or on raccoon, skunk, wolverine and black and brown bear. Raccoons and foxes have become so numerous in certain parts of the Province that they also may be considered as predators.

Trapping seasons are confined to the winter months, usually commencing Nov. 1, but beaver may be taken in some areas as late as May 24. Beaver are covered by tagging regulations under which the trapper is required to submit a yearly estimate of the number of beaver left on his trapline. Before setting out to trap he makes known to the game warden of his area the number of animals he wishes to take; if it is not excessive he receives a tag which must be attached to each pelt. Trappers are not allowed to take more than 25 p.c. of the total population of beaver in their areas and this has played an important part in saving the beaver from extinction. These animals are now so numerous in some areas that it has become necessary to move them to districts where their activity will not cause damage. Nuisance animals are usually liberated on Indian traplines in need of restocking.

Muskrat and squirrel are consistently the most important source of revenue among the furs of British Columbia. Marten was once in greatest demand, but mink appears to be taking precedence.

It is unlawful to ship fur out of or into the Province without permission and also to ship fur within the Province without plainly labelling the parcel with the sender's name, address and the number of his Special Firearms Licence. These regulations enable the game authorities to keep close control over fur shipments. Almost all of the raw fur business is centred in Vancouver and a game warden is posted there to supervise fur sales and fur traders. His regular visits to the traders keep infractions of the regulations at a minimum.

Low prices caused by changes in fashion and other factors such as the relatively high wages in construction and other industries, have made the trapping of fur for a livelihood unattractive in recent years. Little trapping is carried on today as compared with earlier years and in consequence fur-bearers have become quite prevalent in all parts of the Province. The number of pelts upon which royalty was paid during 1955 was 359,365, of which 76 p.c. were squirrel, 12 p.c. muskrat, 4 p.c. mink, 3 p.c. weasel and 2 p.c. beaver. The remainder included fisher, silver, red and cross fox, lynx, marten, otter and wolverine.

Yukon Territory.—Under registered trapline legislation introduced in 1950, 420 individual trapline registrations have been approved for the area extending from the southern border to the 65th parallel of latitude. Beyond this line to the northern boundary the trappers, who are nomadic bands of Indians, have registered on two group-trapping

areas; one, for the Loucheaux Band No. 10 of Old Crow, has 32 registrations approved for heads of families, and the other, for the Loucheaux Band No. 7 of Fort McPherson, N.W.T., has five registrations. The initial registration fee for a trapline, either group or individual, is \$10 and the annual renewal fee is \$5.

During the past few years, low fur prices have discouraged trapline activities and trappers have been forced to find other occupations. As a consequence, beaver, fox, lynx and squirrel are more prevalent and marten, mink and muskrat are more than holding their own in number. On the other hand, fisher, wolverine, otter and weasel are scarce. Pelts taken in the 1955-56 season included: 51,323 squirrel, 49,947 muskrat, 3,162 beaver, 949 marten, 837 weasel, 651 mink (plus ranch raised 125), 2,029 lynx, 24 cross fox, 59 red fox, 6 silver fox, 85 white fox, 48 otter, 42 fisher, 3 bear, white or polar, 29 bear not specified, 232 wolverine, 19 wolf and 4 coyote.

The only fur-bearing animal on a quota is beaver; trappers are permitted to shoot or trap one beaver, including bank beaver, from each beaver house. Trapping may be prohibited over an area covered by a trapline permit if this is considered necessary for the conservation of breeding stock. During the months of February, March and April 1957, the lethal control program conducted since 1953 against predators, particularly wolves, was extended in scope by the establishment of lethal stations as far north as the 66th parallel of latitude. Poisoned bait was distributed by aircraft over a large number of lakes where wolf concentrations were observed.

Game law enforcement is in the hands of the Royal Canadian Mounted Police; in addition three federal park wardens, 20 grade A and B guides and 15 appointed citizens act as game guardians.

Northwest Territories.—Utilization of the fur and game resources in the Northwest Territories is governed by the Northwest Territories Game Ordinance. Trapping privileges are available only to resident Indians and Eskimos and those white persons who were licensed to hunt and trap in the Territories prior to 1938 and who have continued to reside therein. Provision is also made for the issue of general hunting licences to the descendants of these white persons provided they have continued to reside in the Northwest Territories and are dependent upon hunting for a livelihood.

Because of the nomadic nature of the Eskimo and the large areas over which he must hunt and trap, there is no provision for trapline registration in the Franklin and Keewatin Districts though a number of game preserves have been established in the Territories. Largest of these is the Arctic Islands Game Preserve which comprises all the Arctic Islands north of the mainland and a large area on the mainland.

Provision under the Game Ordinance for the establishment of registered traplines became effective in the Mackenzie District on July 1, 1949. Under this legislation, exclusive trapping rights in limited areas are granted to the trappers to encourage them to manage carefully the fur-bearers found there and to effect improvements leading to increased fur production. The Mackenzie District is divided into eight Game Management Districts, covering 369,315 sq. miles—over 50 p.c. under registration. There are 271 individual registered areas and 102 group areas.

The downward trend of the fur market in recent years has caused trappers to lose interest in trapline activities; many have obtained employment elsewhere and others are reluctant to trap very far away from the settlements. After showing a considerable increase in 1954-55, the trapping industry declined again in 1955-56. In the latter year 366,000 pelts were taken valued at \$806,000 as compared with 478,000 in 1954-55 with a value of \$1,167,000. Thus the fur trade continues in a depressed condition and there is no indication of substantial revival. White fox production dropped to 27,720 in 1955-56 as compared with 60,483 in 1954-55 which was the peak year of the four-year cycle. Muskrat and beaver production also declined considerably mainly because of low prices for pelts.

Beaver are taken on a quota basis. Trappers are permitted to shoot or trap one beaver for each occupied beaver lodge. In areas where beaver are scarce and where conditions are suitable, transplant operations have been carried out. Close or short seasons

and, if necessary, quotas are established when a particular species of fur-bearing animal is being overtrapped. A wolf-poisoning program is carried out in areas where these animals have become detrimental to desirable wildlife.

Game law enforcement is the responsibility of wardens stationed at the principal settlements in the Mackenzie District; elsewhere in the Territories it is handled by the Royal Canadian Mounted Police.

Section 3.—Fur Farming

Fur-bearing animals were first raised in Canada on farms in Prince Edward Island about 1887 and in Quebec in 1898; today fur farming is carried on in all the provinces. Foxes were the first fur-bearers to be raised in captivity on a commercial scale but mink, chinchilla, raccoon, marten, fisher, fitch, nutria and others are now being reared. Mink are the most numerous, accounting for 93 p.c. of the total fur-bearing animals on farms in 1955; chinchilla followed with 6 p.c.

There was a slow and steady increase in the number of fur farms until 1920 when 587 were reported, followed by a period of more rapid growth from 1920 to 1938 when the number reached 10,454 with a production value of \$6,500,000. In 1939, when the London and other European markets were lost to the fur industry, prices declined and many fur farms went out of production. Though prices rose considerably after World War II, operating costs increased and the number of fur farms, particularly those conducted in conjunction with other farming operations, continued to decrease. By 1955 only 2,706 farms reported but the value of production had reached \$17,000,000.

Though the earliest and most intensive fur-farming operations were concerned with fox raising in the Maritime Provinces and Quebec, the sharp decline in the popularity of fox furs and the steady rise in mink resulted in Ontario and Western Canada taking predominant positions in the raising of fur animals. A distribution of the 433,266 animals on fur farms at Dec. 31, 1955, showed 18 p.c. in British Columbia, 41 p.c. in the Prairie Provinces, 26 p.c. in Ontario, 7 p.c. in Quebec and 8 p.c. in the Atlantic Provinces.

Furs have for centuries been used for clothing and adornment and the demands of fashion, encouraging the development of new colour phases in fox and mink, have been an important incentive to the fur-farming industry. There have always been mink mutations in the wild state but these unusual animals stood little chance of survival and such pelts were exceedingly rare. Starting with wild-caught miuk, breeders have, by cross-breeding, produced mink furs in a variety of colours. Among the earliest mutations to appear was an attractive bluish gray mink which became known as platinum mink. Then mutations were crossbred and a still greater profusion of colour combinations appeared, notably the sapphire mink, a cross of the steel blue Aleutian with the blue gray platinum. Other unusual colour patterns are the royal pastel, a beautiful brown mink with a bluish cast, and an exquisite snow white mink.

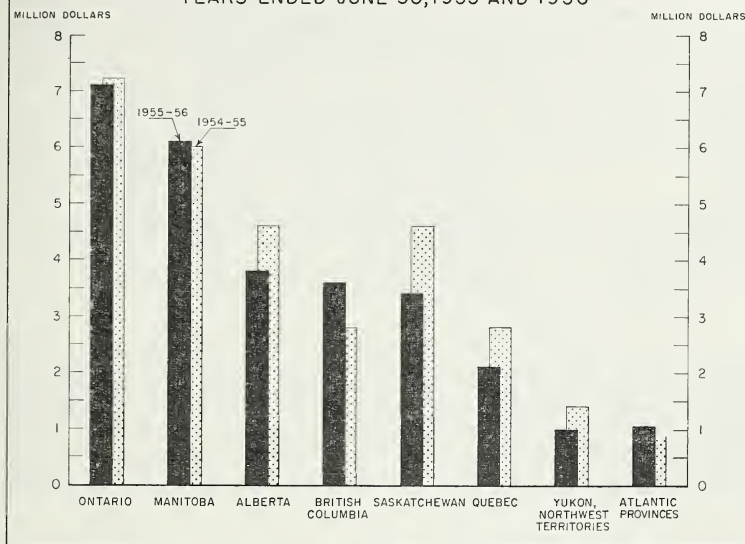
In 1937 some chinchillas were imported into Saskatchewan and later into other provinces. These valuable little animals have a rich, soft fur. Although the original cost of chinchillas is high, the outlay for raising them is small. By 1955 there were 669 fur farms reporting 26,913 chinchillas valued at \$3,031,107.

Section 4.—Statistics of Fur Production*

Total Fur Production Statistics.—Early records of raw fur production were confined to the decennial censuses when account was taken of the number and value of pelts obtained by trappers. In 1920 the Dominion Bureau of Statistics commenced an annual survey of raw fur production. For a number of years the statistics were based on information supplied by the licensed fur trappers. More recently annual statements based on royalties, export tax, etc., have been made available by the provincial game departments (except Prince Edward Island), and these statements are used in the preparation of the statistics issued annually by the Bureau. Figures for Prince Edward Island are based on returns supplied to the Dominion Bureau of Statistics by fur dealers in that Province.

* Revised in the Agriculture Division, Dominion Bureau of Statistics.

VALUE OF PELTS PRODUCED IN CANADA, YEARS ENDED JUNE 30, 1955 AND 1956



1.—Pelts of Fur-Bearing Animals Produced and Percentage Sold from Fur Farms, Years Ended June 30, 1937-56

Year	Pelts		Percentage of Value Sold from Fur Farms ¹	Year	Pelts		Percentage of Value Sold from Fur Farms ¹
	Number	Value			Number	Value	
		\$				\$	
1937	6,237,640	17,526,365	40	1947	7,486,914	26,349,997	37
1938	4,745,927	13,196,354	43	1948	7,952,146	32,232,992	37
1939	6,492,222	14,286,937	40	1949	9,902,790	22,899,882	33
1940	9,620,695	16,668,348	31	1950	7,377,491	23,184,033	34
1941	7,257,337	21,123,161	26	1951	7,479,272	31,134,400	36
1942	19,561,024	24,859,869	19	1952 ²	7,931,742	24,215,061	42
1943	7,418,971	28,505,033	24	1953	7,568,865	23,349,680	43
1944	6,324,240	33,147,392	28	1954	6,274,727	19,287,522	49
1945	6,994,686	31,001,456	31	1955	9,670,796	30,509,515	43
1946	7,593,416	43,870,541	30	1956	7,727,264	28,051,746	56

¹ Approximate.

² Wildlife pelts for Newfoundland included from 1952.

Ontario leads the provinces in value of fur production, accounting for 25 p.c. of the total in the 1955-56 season. Manitoba follows with 22 p.c., Alberta with 13 p.c., British Columbia 13 p.c., Saskatchewan 12 p.c., Quebec 8 p.c., the Atlantic Provinces 4 p.c. and the Yukon and Northwest Territories combined, with 3 p.c.

2.—Pelts of Fur-Bearing Animals Produced by Province, Years Ended June 30, 1955 and 1956

Province or Territory	1955			1956		
	Pelts	Value	Percentage of Total Value	Pelts	Value	Percentage of Total Value
	No.	\$		No.	\$	
Newfoundland.....	25,891	63,535	0.2	35,779	276,742	1.0
Prince Edward Island.....	8,064	115,570	0.4	3,943	50,011	0.2
Nova Scotia.....	114,560	547,231	1.8	86,686	362,597	1.3
New Brunswick.....	61,171	356,725	1.2	30,544	288,442	1.0
Quebec.....	349,963	2,765,347	9.1	298,198	2,095,561	7.5
Ontario.....	1,267,943	7,243,070	23.7	960,181	7,133,666	25.4
Manitoba.....	1,879,157	6,038,776	19.8	1,768,020	6,087,719	21.7
Saskatchewan.....	2,720,979	4,555,802	14.9	2,304,593	3,446,003	12.3
Alberta.....	2,029,338	4,582,937	15.0	1,317,164	3,770,226	13.4
British Columbia.....	522,604	2,830,659	9.3	446,491	3,576,444	12.7
Yukon Territory.....	213,515	242,944	0.8	109,576	155,777	0.6
Northwest Territories.....	477,611	1,166,919	3.8	366,089	805,558	2.9
Canada.....	9,670,796	30,509,515	100.0	7,727,264	28,051,746	100.0

Average prices for the pelts were generally lower in 1955-56 than in 1954-55. Of the nine kinds having the highest value of production, muskrat pelts dropped from \$1.16 in 1954-55 to \$0.95 in 1955-56, beaver from \$14.88 to \$12.10, squirrel from \$0.55 to \$0.46, ermine from \$1.57 to \$1.35, fisher from \$22.75 to \$22.04 and marten from \$9.49 to \$7.85. Increases were noted for mink including standard and mutation from \$19.38 to \$20.19, white fox from \$11.39 to \$13.14 and otter from \$25.70 to \$26.71.

3.—Pelts of Fur-Bearing Animals Taken by Kind, Years Ended June 30, 1955 and 1956

Kind	1955			1956		
	Pelts	Total Value	Average Value	Pelts	Total Value	Average Value
	No.	\$	\$	No.	\$	\$
Badger.....	249	81	0.33	271	95	0.35
Bear, white.....	530	14,840	28.00	454	11,490	25.31
Bear, unspecified.....	324	658	2.03	319	739	2.32
Beaver.....	320,389	4,767,232	14.88	282,036	3,412,108	12.10
Coyote or prairie wolf.....	5,400	13,855	2.57	4,534	11,072	2.44
Ermine (weasel).....	301,059	474,036	1.57	379,587	512,163	1.35
Fisher.....	6,790	154,485	22.75	6,324	139,390	22.04
Fox, blue.....	888	5,142	5.79	331	2,180	6.59
Fox, cross.....	1,983	2,982	1.51	966	1,104	1.14
Fox, new-type.....	1,950	22,538	11.56	1,762	12,577	7.14
Fox, red.....	13,608	10,093	0.74	22,458	12,351	0.55
Fox, silver.....	6,315	52,609	8.33	4,683	31,184	6.66
Fox, white.....	81,783	931,607	11.39	31,728	417,027	13.14
Fox, other.....	26	70	...	74	490	...
Lynx.....	14,427	88,753	6.15	9,988	52,652	5.27
Marten.....	17,710	168,344	9.51	16,641	130,933	7.87
Mink, standard.....	499,321	9,103,196	18.23	515,548	9,895,874	19.19
Mink, mutation.....	296,975	6,325,103	21.30	363,282	7,851,762	21.61
Muskrat.....	5,619,277	6,518,993	1.16	4,518,731	4,313,453	0.95
Otter.....	15,294	393,064	25.70	14,492	387,143	26.71
Rabbit.....	91,064	50,253	0.55	117,709	66,815	0.57
Raccoon.....	33,675	65,743	1.95	36,807	81,743	2.22
Skunk.....	5,917	5,377	0.91	2,932	2,199	0.75
Squirrel.....	2,332,093	1,286,941	0.55	1,391,089	640,235	0.46
Wildcat.....	345	495	1.43	1,404	1,176	0.84
Wolf.....	1,228	4,837	3.94	558	2,510	4.50
Wolverine.....	485	7,647	15.77	599	10,546	17.61
Other.....	1,691	40,541	...	1,947	50,735	...
Totals.....	9,670,796	30,509,515	...	7,727,264	28,051,746	...

Fur Farm Statistics.—There were 2,706 fur farms operating in Canada in 1955 in comparison with 2,566 in the previous year. The increase resulted from the operation of a larger number of chinchilla farms and from the inclusion of fur farm statistics of Newfoundland for the first time.

Fur farms reporting foxes in 1955 numbered 189 as compared with 249 in the previous year; the number of foxes on farms was down by 32 p.c. and the value of these animals by 39 p.c. The number of mink farms increased from 1,858 to 1,912 during 1955. Farms having fewer than 80 mink decreased by 4 p.c. while those having 80 or more increased by 7 p.c. The number of mink on farms increased from 335,150 valued at \$9,632,795 in 1954 to 402,453 valued at \$11,880,147 in 1955. Fox pelt production increased from 6,836 valued at \$70,554 in 1954 to 7,238 valued at \$66,070 in 1955, and mink pelts from 677,014 valued at \$12,868,787 to 786,760 valued at \$15,787,520.

4.—Fur Farms and Value of Fur-Bearing Animals Thereon by Province 1954 and 1955

Province	Fur Farms at Year End		Values of Fur-Bearing Animals on Fur Farms	
	1954	1955	1954	1955
	No.	No.	\$	\$
Newfoundland.....	..	47	..	412,116 ¹
Prince Edward Island.....	42	34	105,000	109,383
Nova Scotia.....	83	86	219,000	250,077
New Brunswick.....	116	112	363,000	353,513
Quebec.....	268	267	1,495,000	1,316,529
Ontario.....	702	736	3,401,000	4,031,095
Manitoba.....	394	372	2,051,000	2,373,636
Saskatchewan.....	145	156	640,000	810,100
Alberta.....	446	481	2,120,000	2,109,448
British Columbia.....	370	415	2,547,000	3,240,504 ¹
Totals.....	2,566	2,706	12,941,000	15,008,081

¹ Figures for one fox farm in Newfoundland and two in British Columbia are included in the total for Canada but are excluded from provincial totals.

5.—Fur-Bearing Animals on Fur Farms as at Dec. 31, 1954 and 1955

Kind of Animal	1954		1955 ¹	
	No.	Value	No.	Value
		\$		\$
Fox—				
Blue.....	244	113,455	197	69,269
Platinum.....	409		287	
Pearl platinum.....	1,395		1,053	
Silver.....	2,662		1,552	
White-marked.....	124		131	
Other.....	44		73	
Mink—				
Standard.....	103,940	9,632,795	104,036	11,880,147
Mutation—				
Platinum (silverblue).....	61,584		57,369	
Pastel.....	94,011		127,439	
Other.....	75,615		113,609	
Chinchilla.....	21,649	3,170,599	26,913	3,031,107
Marten.....	169	11,640	177	6,475
Nutria.....	224	10,702	316	19,290
Raccoon.....	87	586	84	548
Other.....	32	1,378	30	1,245
Totals.....	362,189	12,941,155	433,266	15,008,081

¹ Includes Newfoundland.

6.—Number and Value of Pelts Produced on Fur Farms by Kind 1954 and 1955

Kind of Animal	1954		1955 ¹	
	No.	Value	No.	Value
		\$		\$
Fox—				
Blue.....	166	1,825	228	2,444
Platinum.....	512	4,214	468	3,963
Pearl platinum.....	1,832	23,391	2,291	22,909
Silver.....	4,191	40,272	4,119	35,982
White-marked.....	127	794	106	609
Other.....	8	58	26	163
Mink—				
Standard.....	264,422	4,119,967	275,242	4,354,689
Mutation—				
Platinum (silverblue).....	141,060	2,414,448	134,509	2,450,174
Pastel.....	172,984	3,898,745	220,925	5,021,007
Other.....	98,548	2,435,627	156,084	3,961,650
Chinchilla.....	1,460	34,245	1,742	47,897
Raccoon.....	6	10	17	45
Other.....	105	986	72	765
Totals.....	685,421	12,974,582	795,829	15,902,297

¹ Includes Newfoundland.

Section 5.—Marketing of Furs

Montreal, Que., is the leading Canadian fur mart although auction sales are also held at Vancouver, B.C., Edmonton, Alta, Regina, Sask., and Winnipeg, Man. The Saskatchewan Government maintains a Fur Marketing Service at Regina to assist producers in that Province.

Grading.—The grading of furs to secure uniformity was introduced in 1939 by the federal Department of Agriculture so that furs may be purchased by grade without the necessity of buyers from other countries personally examining the pelts. Grading offers many advantages to the producer as well as to the trade in general. It educates the rancher as to the proper value of his pelts and creates an incentive to improve the quality of the product; it furnishes guidance in the planning of future matings, aids in raising the standard of quality of the entire crop of pelts and helps in advancing the level of prices for high quality pelts.

Exports and Imports.—Before World War II, Canada marketed fur pelts mainly in the United Kingdom but that market was practically dormant during the war years and the fur trade was carried on chiefly with the United States. A revival of trade with the United Kingdom took place after the War but almost 80 p.c. of Canadian fur exports still go to the United States.

The Canadian fur trade, both export and import, is mostly in undressed furs, the value of dressed and manufactured furs going out of or coming into Canada being a comparatively small proportion of the total. Exports consist largely of furs which Canada produces in greatest abundance, mink being the most valuable followed by beaver, muskrat and fox. Furs such as Persian lamb, certain types of muskrat, mink, sheep and lamb and squirrel make up the major portion of the imports.

In 1947 the Canadian Government sought to interest European buyers in Canadian furs by sponsoring an exhibit of ranch-raised furs at an international trade fair in Switzerland. This was the beginning of a series of exhibits in European countries—England, France, Italy and Switzerland—the primary purpose of which was to induce buyers to attend the sales or to purchase their requirements through brokers. These exhibits assisted in attracting attention to Canada as a producer of high quality furs.

Exports and imports of all furs to and from the United States, the United Kingdom and all countries are given for the years 1955 and 1956 in Table 7.

7.—Exports and Imports of Furs by Kind 1955 and 1956

Kind of Fur	1955			1956		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
EXPORTS						
	\$	\$	\$	\$	\$	\$
Undressed—						
Beaver.....	1,052,094	3,199,510	4,458,569	1,015,442	2,330,198	3,730,349
Ermine.....	51,266	321,172	373,091	203,877	232,930	436,807
Fisher.....	104,267	68,689	192,887	111,241	55,317	185,517
Fox, all types.....	203,806	745,957	987,806	82,881	913,892	1,001,433
Lynx.....	139,800	55,862	201,544	49,645	39,519	89,709
Marten.....	57,490	146,215	205,707	39,572	99,465	139,165
Mink.....	863,243	16,058,268	17,100,477	698,437	15,636,199	16,673,847
Muskrat.....	1,234,748	2,029,795	3,290,427	1,323,427	1,069,132	2,453,676
Otter.....	15,902	88,301	107,251	5,610	34,601	51,615
Rabbit.....	103	67,454	67,557	415	89,426	92,578
Raccoon.....	694	50,906	51,600	408	23,446	23,854
Seal.....	—	—	—	—	36,491	36,491
Skunk.....	5,933	2,690	8,623	4,444	5,005	9,449
Squirrel.....	879,700	54,770	937,347	580,057	17,382	597,467
Weasel.....	8,449	143,132	151,901	96,412	111,853	208,265
Wolf.....	13,214	5,479	25,006	4,462	4,084	8,636
Other.....	22,291	95,697	127,130	8,172	132,071	154,247
Dressed—						
Fox.....	—	1,774	2,224	—	—	391
Other.....	24,922	915,919	1,496,274	9,713	552,742	1,310,995
Manufactured.....	7,071	413,296	439,529	3,175	491,126	528,408
Totals.....	4,684,993	24,464,886	30,224,950	4,237,390	21,874,879	27,732,899
IMPORTS						
	\$	\$	\$	\$	\$	\$
Undressed—						
China and Jap mink.....	4,683	47,359	125,581	7,201	19,238	139,586
Fox.....	54,499	103,786	196,562	129,449	22,650	182,765
Kolinsky.....	123,854	—	248,122	126,319	385	278,207
Marine.....	115	23,484	23,509	—	—	—
Mink.....	159,745	2,951,320	3,153,227	130,953	3,371,412	3,731,975
Muskrat.....	136,395	3,324,762	3,463,008	112,911	2,034,050	2,221,729
Oposum.....	1,707	10,657	12,364	—	16,004	16,004
Persian lamb.....	1,712,384	5,838,567	8,236,090	2,396,723	5,715,927	8,684,322
Rabbit.....	—	34,386	263,007	—	59,998	224,415
Raccoon.....	—	860,328	860,328	—	806,987	806,987
Sheep and lamb.....	5,071	301,738	525,218	3,428	218,177	491,592
Squirrel.....	61,642	90,235	240,178	36,848	68,249	127,609
Other.....	478,261	1,187,802	2,757,394	309,374	1,098,598	2,325,936
Dressed—						
Rabbit.....	3,596	7,722	66,915	—	8,135	51,772
Sheep skins.....	808	230,053	232,025	2,841	195,443	199,907
Hatters furs.....	248,062	523,318	1,337,995	35,198	590,343	1,113,234
Other.....	135,592	2,153,577	2,300,229	47,364	2,486,317	2,612,155
Manufactured.....	182,450	617,385	806,749	51,907	538,943	623,432
Totals.....	3,308,864	18,307,079	24,848,591	3,390,516	17,250,856	23,831,627

Section 6.—The Fur Processing Industry*

The rather general term 'fur processing' includes the fur dressing and dyeing industry and the fur goods industry. The former is concerned with the dressing or dyeing of pelts on a custom basis and the latter is a manufacturing industry that makes up fur goods such as coats, scarves and gloves.

* Prepared in the Animal Products Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

Fur dressing and dyeing industry statistics were first recorded in 1917 when 12 establishments with 511 employees reported receipts of \$1,071,805. Eight establishments in 1924 reported revenues of \$1,120,895, expenditures of \$162,013 on dyes, chemicals and other materials used, and expenditures of \$561,233 on salaries and wages to 539 employees. Of the 3,473,909 skins treated in that year, muskrat pelts made up 47 p.c., rabbit 19 p.c. and squirrel 10 p.c.

The greatest number of skins treated was reported in 1941 when 14,592,079 were handled, but almost 53 p.c. of those were rabbit skins so that the revenue for that year was only \$2,476,289. The record revenue reported was that for 1949 when \$6,691,418 was received and rabbit skins constituted 38 p.c. of the total processed.

In 1955 the number of skins treated was 9,762,062, of which muskrat comprised 51 p.c., Persian and other types of lamb 13 p.c., mink 12 p.c., squirrel 9 p.c. and rabbit 7 p.c.

8.—Principal Statistics of the Fur Dressing Industry 1952-55

Item		1952	1953	1954	1955
Establishments.....	No.	17	16	17	18
Employees on Salaries—					
Male.....	No.	82	74	84	92
Female.....	"	30	24	19	24
Employees on Wages—					
Male.....	No.	942	900	859	876
Female.....	"	226	216	180	170
Salaries paid.....	\$	460,998	440,036	437,131	538,703
Wages paid.....	\$	2,865,534	2,749,531	2,562,980	2,756,638
Cost of materials used (dyes, chemicals, etc.).....	\$	1,177,345	1,026,173	963,538	1,121,805
Pelts treated.....	No.	12,085,066	11,001,366	9,279,897	9,762,062
Amount received for treatment of furs.....	\$	6,061,850	5,920,014	5,634,991	6,498,292

Statistics on a comparable basis for the fur goods industry are available from 1921, when 219 establishments reported a gross value of production of \$13,639,609, employees numbered 2,621 and salaries and wages amounted to \$3,013,706. Cost of materials used in the manufacturing process totalled \$8,118,833. Principal statistics of the industry for the years 1952 to 1955 are given in Table 9.

9.—Principal Statistics of the Fur Goods Industry 1952-55

Item		1952	1953	1954	1955
Establishments.....	No.	596	600	581	558
Employees on Salaries—					
Male.....	No.	1,220	1,122	1,083	1,015
Female.....	"	355	314	282	257
Employees on Wages—					
Male.....	No.	2,629	2,715	2,435	2,369
Female.....	"	1,765	1,764	1,489	1,378
Salaries paid.....	\$	5,033,155	4,743,807	4,531,941	4,470,610
Wages paid.....	\$	10,388,597	11,103,947	9,816,442	9,652,509
Cost of materials used.....	\$	41,909,453	39,639,350	36,058,592	38,389,138
Value of factory shipments.....	\$	66,245,562	63,991,716	58,464,790	60,349,381

Changes in living habits and standards in the past quarter-century are reflected in the type of goods produced by the fur goods industry. For example in 1921 there were 31,604 ladies' fur coats and jackets produced whereas in 1955 the number was 203,233. The manufacture of men's fur coats showed a decided reversal in the market; there were 5,692 men's fur or fur-lined coats manufactured in 1921 but only 149 in 1955.

CHAPTER XV.—MANUFACTURES

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

This Chapter deals with manufacturing in Canada in three Parts. Part I reviews the manufacturing situation at the end of 1955, emphasizing particularly the fifteen leading industries. Part II provides general statistical analyses including: manufacturing statistics from 1917; detailed treatment of current production under various groupings and individual industries; and principal factors in manufacturing production such as capital expenditures, employment, salaries and wages and size of establishment. Part III deals with the provincial and local distribution of manufacturing production.

A special review of postwar growth of manufacturing within the framework of Canadian economic development appears in the 1956 Year Book, pp. 619-624.

PART I.—REVIEW OF MANUFACTURING

Canada is one of the world's largest manufacturing nations, probably ranking about sixth. Manufacturing contributed 29 p.c. of the net national income in 1955, which was almost as great a proportion as manufacturing holds in the United States, where it contributed 32 p.c. About one-quarter of the employed population in Canada were working in manufacturing in mid-1955.

Canada's position as one of the world's leading traders is based largely on the country's natural resources, and is reflected in the industrial structure. Three industries stand out as major exporters—the pulp and paper mills, the non-ferrous smelting and refining plants, and the sawmills. These three large exporters are all closely concerned with the processing of Canada's natural resources. The aluminum plants, which form part of the smelting and refining industry, are an exception, since they process imported raw materials, but the reason for their location in Canada is the abundant supply of another natural resource—water power.

Slaughtering and meat packing and the butter and cheese industry, two other resource-based industries appearing among the leading fifteen in value of shipments, were once important exporters but are now occupied in supplying the home market because demand for their products from a larger and more wealthy population has increased faster than production. The bakeries and the manufacturers of miscellaneous food preparations are also turning out much greater quantities of food for the growing population.

The growth of population is only one way in which Canada is providing a domestic market for more and more industrial produce. The range of industries supplying domestic needs has greatly expanded and at the same time the major export industries are finding an expanding market for their products in Canada. Growth stimulates growth. Canada's mines, forest industries, transport systems and service trades expand, and that expansion requires building materials, machinery and equipment. Every new factory provides an increased market for capital goods and for raw materials or semi-finished products. Thus the market for existing products expands calling for increased output, and a demand for new products springs up, which is met by imports until the market is able to support domestic production.

Fifteen industries were responsible for 46.4 p.c. of total shipments by manufacturers in 1955. Five of these were primarily engaged in meeting the requirements of the domestic consumer for goods required for current use—the four food-producing industries already mentioned, and the printing and publishing industry which derives most of its revenue from newspapers and periodicals. The three major exporting industries have also been mentioned, and the remaining seven of the fifteen leading industries are mainly occupied in meeting the requirements of Canadian industry for capital goods or materials, and the requirements of Canadian consumers for durable goods.

Several of the leading industries are controlled by interests in the United States. Information for 1955 is not available, but a special study for 1953 gave figures which are still of interest. The value of shipments of selected firms under United States control was expressed as a percentage of all shipments by the industry in question. For the exporting industries, 39 p.c. of shipments of the pulp and paper industry were made by United States-controlled firms in 1953, and 70 p.c. of the shipments of non-ferrous smelters and refineries. Data for sawmills were not available separately, but 6 p.c. of the shipments of the wood products industries were by firms controlled in the United States. For the main industries meeting current domestic needs, there were no such striking figures although 16 p.c. of the shipments of dairy products were from United States-controlled firms.

For the leading industries meeting manufacturers' needs and the needs of consumers for durables, the percentages of shipments made by United States-controlled firms in 1953 were as follows: petroleum products, 68 p.c.; motor vehicles, 98 p.c.; primary iron and steel, 7 p.c.; rubber goods, 78 p.c.; and motor vehicle parts, 67 p.c. Data for the aircraft and parts industry and the miscellaneous electrical products industry were not available separately.

In 1955, pulp and paper production was Canada's leading industry; shipments were valued at \$1,327,000,000. The pulp and paper mills are fed by the great coniferous forests, through which run extensive river systems. The rivers provide a means of transporting pulpwood to the mills, and also provide the power for generating electricity. The importance of cheap power to this industry is emphasized by the fact that, in 1955, it used about 34 p.c. of all the electricity utilized by Canadian manufacturers.

On the market side, there has been a great increase in the consumption of paper throughout the world, especially in North America. Increased education has advanced the sales of newspapers, books and other printed matter, and new uses are continually being found for paper—for building materials, packaging materials, electric insulation, and for a wide range of other purposes. In 1955, 74 p.c. of the industry's shipments consisted of paper—\$981,000,000 out of a total of \$1,327,000,000. Exports of paper and paper goods were valued at \$694,000,000 and exports of wood pulp at \$297,000,000. These exports, totalling \$991,000,000, amounted to 75 p.c. of production. The industry produced 10,151,000 tons of wood pulp in 1955, of which 2,383,000 tons were exported. The

remainder, together with about 502,000 tons of other material (mainly waste paper), was turned into 8,000,000 tons of paper including 6,196,000 tons of newsprint and 861,000 tons of paperboard; 5,763,000 tons of the newsprint were exported.

The non-ferrous smelting and refining industry, Canada's second largest manufacturing industry, shipped products to the value of \$1,212,000,000 in 1955. Canada is one of the world's leading producers of non-ferrous metals, standing first in the production of nickel, second in aluminum, third in zinc, fourth in lead, and fifth in copper. These figures do not include the metallic content of exported ore. Canada is the world's leading exporter of non-ferrous metals.

Many of the country's most important base-metal ore bodies were discovered before the turn of the century, but their complexity prevented early exploitation. Unlike important deposits in other countries, which consist largely of oxides or of sulphides of a single metal, they were found to contain ores of two or more base metals intimately associated and frequently containing appreciable quantities of precious metals, such as gold, silver and platinum. Their development was the result of considerable skill and enterprise. The industry operates smelters and refineries that rank among the largest and most highly integrated of their kind in the world. Cheap water power located near the ore bodies is another advantage that enabled the industry to sell in world markets at competitive prices. The industry is based largely on Canadian ores, with the major exception of the aluminum plants which import bauxite and alumina, depending on cheap electric power for their success in international trade.

Exports of products of this industry in 1955 included nickel in various forms (\$215,000,000), aluminum in primary forms (\$199,000,000), copper in primary forms (\$110,000,000), zinc slab or cake (\$47,000,000) and pig lead (\$22,000,000). These together amounted to about \$593,000,000, or 49 p.c. of the total value of the industry's shipments.

The petroleum products industry was the third largest of Canadian manufacturing industries, recording sales of \$1,049,000,000 in 1955. The industry used about 6,800,000,000 gal. of crude oil, of which 55.4 p.c. was from Canadian wells. The refineries of Quebec and the Maritimes continued to operate on imported oil because of their distance from Canada's western oil fields. However, the recent construction of pipelines has resulted in heavy consumption of Canadian crude by refineries in Ontario.

This industry has grown considerably in the past few years, keeping pace with general Canadian expansion. Special studies made of the net use of energy in Canada showed an increase from about 1,088,000,000,000 British thermal units in 1926 to about 2,171,000,000,000 in 1952. This growth was partly a result of the increase in population but the wider use of energy caused an increase in the net amount used per head of population from 115,000,000 B.t.u. in 1926 to 151,000,000 in 1952. The part played by liquid petroleum fuels in the total energy picture increased considerably over the period; in 1926, they supplied about 9 p.c. of Canada's net consumption of energy and in 1952 about 37 p.c. The advance resulted from increased use by industry, a large increase in the consumption of fuel oil for heating homes and buildings, and the conversion of the railroads to diesel locomotives.

Three of Canada's fifteen largest manufacturing industries are occupied in the production of transportation equipment; the motor vehicles industry ranked fourth in 1955 with sales of \$907,000,000, the aircraft and parts industry ninth with sales of \$354,000,000, and the motor vehicle parts industry fourteenth with sales of \$285,000,000.

The main items shipped by the motor vehicles industry were approximately 375,000 passenger cars valued at \$611,000,000, 78,000 trucks valued at \$136,000,000, and 557 buses valued at \$7,100,000. Of the vehicles shipped, 25,700 passenger cars worth \$20,000,000 (including 13,300 chassis without bodies) and 9,400 trucks worth about \$9,000,000 were shipped for export. Imports included about 48,500 passenger cars, 8,900 trucks and 500 buses, with a total value of \$114,000,000.

Taking into account production, imports and exports, the apparent supply of new vehicles in Canada in 1955 was 398,000 passenger cars and 79,000 commercial vehicles. This new supply was offset by the withdrawal from use of about 151,000 passenger cars and 21,000 commercial vehicles. Total registrations during the year covered 2,935,000 passenger cars and 938,000 commercial vehicles so that there was one passenger car for every 5.3 persons in the country. Taking all motor vehicles together, including motorcycles and tractors, there was one vehicle for every 4.0 persons. Ontario has one of the world's heaviest concentrations of automobile ownership. In that Province, there was one car for every 4.0 persons, one motor vehicle for every 3.2 persons, or 0.98 automobile for each family. By 1956 the latter figure had increased to 1.02 per family.

The production of aircraft and parts was a major industry in Canada during the Second World War, but output declined abruptly afterwards and as recently as 1950 amounted to only \$55,000,000. By 1955, however, its total shipments had increased again to \$354,000,000, including \$73,000,000 worth of parts alone, though this total was still well below the \$427,000,000 recorded in 1944. The recent growth in the industry began with the outbreak of war in Korea in 1950. Features of the expansion were the development of an all-Canadian long-range fighter for defence in the North and the production of several types of defence aircraft designed in the United States or the United Kingdom. The industry, however, is not dependent entirely on the defence program. Several types of aircraft have been developed to meet Canadian flying conditions, especially in the vast areas of the North, and these have also met with a good response from users abroad. The expansion of aircraft production has been accompanied by the establishment of facilities for producing many component items, some of them new to Canadian manufacturing, such as aircraft instruments, needle bearings, and special alloys to withstand the heat of jet engines.

The slaughtering and meat packing industry, which came fifth in 1955 with shipments valued at \$809,000,000, was the largest industry in the foods group. Also included among the fifteen leading industries were butter and cheese factories which came eighth with sales of \$427,000,000, the miscellaneous food preparations industry twelfth with sales of \$304,000,000, and bakeries thirteenth with sales of \$289,000,000. In terms of value added by manufacture, these industries, except for bakeries, would be considerably lower on the list. Their products are not so highly processed as are those of many other industries and much less is added in the manufacturing process to the value of their raw materials. Shipments by the slaughtering and meat packing industry included \$432,000,000 worth of fresh and frozen meats, \$120,000,000 worth of cured and smoked meats, and \$84,000,000 worth of sausage and cooked meats. Inedible by-products included \$8,900,000 worth of cattle hides. To produce these items, the industry slaughtered over 8,400,000 animals valued at \$467,000,000 in 1955.

Of the \$427,000,000 worth of shipments by butter and cheese factories in 1955, milk and cream sold as such brought in \$159,000,000, and ice cream \$36,000,000. About 306,000,000 lb. of butter and 81,000,000 lb. of cheese were shipped, together valued at \$202,000,000.

The miscellaneous food preparations industry ranked twelfth with sales of \$304,000,000. This industry depends largely on imported materials but sells almost entirely in the domestic market. Over one-third of the industry's activities are concerned with the roasting and packing of coffee, and the blending and packing of tea. Shipments of coffee were valued at \$73,000,000 and those of tea at \$47,000,000 in 1955.

The bread and other bakery products industry, which came thirteenth among the industries in 1955, produced goods to the value of \$289,000,000, all for the home market. Bread sales accounted for \$175,000,000 of this total; the average per capita consumption of bread was 98.1 lb., which was 7.3 lb. less than in 1953 and 2.4 lb. less than in 1954.

The lumber industry has been a mainstay of Canada's economy since the earliest days and in 1955 ranked as the sixth largest manufacturing industry of the country. In that year sawmill products shipped were valued at about \$644,000,000 and consisted mainly of lumber (\$542,000,000), shingles (\$30,000,000) and railroad ties (\$9,000,000).

Logs and bolts to the value of about \$311,000,000 were used, together with about \$28,000,000 worth of other materials and supplies. Of the lumber sawn, 63 p.c. by value was produced in British Columbia, 13 p.c. in Quebec, and 11 p.c. in Ontario. Softwoods made up 95 p.c. by quantity of the lumber sawn. Exports from Canada of sawmill products were valued at \$423,000,000 in 1955.

There has been a considerable expansion in the primary iron and steel industry in recent years and important technical developments have been pioneered in Canada, including the continuous casting of steel shapes and a faster process for the use of oxygen in steel-making. In 1955, shipments valued at \$526,000,000 placed the industry seventh among the industries of the country. Production amounted to 4,535,000 tons of steel. Few of the steel ingots produced were sold as such, nearly all of them being further processed by the makers. About 23 p.c. of the pig iron produced was sold to other firms.

The industry is dominated by four integrated plants, two of them at Hamilton, Ont., and one each at Sydney, N.S., and Sault Ste. Marie, Ont. There are also other steel plants across the country which feed their furnaces on purchased pig iron and scrap, and two blast furnaces which do not form part of an integrated steel plant. The industry uses a good deal of Canadian iron ore and coke from Canadian coal, but imported ore is mainly used. This is partly because some plants can ship ore more conveniently from United States mines than from Canadian mines, and partly because a blast furnace requires a range of different types of iron ore, and must therefore rely on varied sources.

The miscellaneous electrical apparatus and supplies industry, the main products of which are electric wire and cables, electric light bulbs and fluorescent tubes, came tenth on the list of industries in 1955 after having appeared within the fifteen leading industries for the first time in 1954. This industry is only one of the electrical industries showing extremely rapid growth in recent years. While the miscellaneous industry shipped goods to the value of \$325,000,000, in 1955 the radio and radio parts industry had a production valued at \$263,000,000, the heavy electrical machinery industry at \$198,000,000, the refrigerators, vacuum cleaners and appliances industry at \$136,000,000, and the batteries industry at \$40,000,000. Other industries also produce wire and cables and electric light bulbs and tubes, and the total output of these commodities in 1955 amounted to \$151,000,000 and \$22,000,000 respectively.

The rubber goods industry, eleventh in the field with shipments of \$322,000,000 in 1955, depends mainly on the home market. It is heavily influenced by the automotive industry because tires and tubes together make up over half the shipments, the other major item being rubber footwear. Of the rubber used in 1955, 44.5 p.c. was imported natural rubber, 40.4 p.c. was domestically produced synthetic rubber and the remainder was reclaimed rubber.

The printing and publishing industry, with sales valued at \$275,000,000 in 1955, came fifteenth among the industries. This industry is rather unique in that it pays more in salaries and wages than it spends on raw materials—\$108,000,000 as against \$75,000,000; in 1955 of the total sales, newspapers accounted for \$171,000,000. Advertising brought in \$127,000,000 of that amount and the remaining \$44,000,000 came from the actual cash price of the newspapers.

PART II.—STATISTICS OF MANUFACTURING

Section 1.—Growth of Manufacturing

It is impossible to give absolutely comparable statistics of manufacturing over a long period of years. From 1870 to 1915 statistics were collected only in connection with decennial or quinquennial censuses and there was inevitably some variation in the information collected. The annual Census of Manufactures was instituted in 1917 and, though numerous changes have been made since then in the information collected and the treatment of the data, an effort has been made to carry all major revisions back to 1917, so that the figures for the period since then are on a reasonably comparable basis.

Beginning in 1952 the Bureau of Statistics changed its policy with regard to the collection of statistics on the production of manufactured goods. Firms in several industries where year-end inventory changes were known to be insignificant were requested to report value of shipments f.o.b. plant instead of gross value of products. Under the "value of products" concept, establishments were asked to report the factory selling value of the products made whether sold or not, the unsold portion being assigned the average selling value of similar articles sold during the year. Under the "value of shipments" concept, establishments are required to report their sales during the year regardless of when the products were made, an item usually readily available from the firms' records. The changeover was made to provide increased ease in reporting for the majority of plants and at the same time to produce more reliable and useful statistics.

1.—Summary Statistics of Manufactures 1917-55

NOTE.—Statistics of manufacturing from 1870 have been published but between that year and 1917 figures are not on a comparable basis to the series given below. Statistics for significant years appear in the 1943-44 Year Book, p. 363. Figures of the non-ferrous metal smelting industries were first included with manufactures in 1925.

Year	Estab- lish- ments	Employees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture ¹	Gross Value of Products ²
	No.	No.	\$	\$	\$	\$
1917.....	21,845	606,523	497,801,844	1,539,678,811	1,281,131,980	2,820,810,791
1918.....	21,777	602,179	567,991,171	1,727,631,548	1,399,794,849	3,227,426,397
1919.....	22,083	594,066	601,715,668	1,779,056,765	1,442,400,638	3,221,457,403
1920.....	22,532	598,893	717,493,876	2,085,271,649	1,621,273,348	3,706,544,997
1921.....	20,848	438,555	497,399,761	1,365,292,885	1,123,694,263	2,488,987,148
1922.....	21,016	456,256	489,397,230	1,272,651,585	1,103,266,106	2,375,917,691
1923.....	21,080	506,203	549,529,631	1,456,595,367	1,206,332,107	2,662,927,474
1924.....	20,709	487,610	534,467,675	1,422,578,946	1,075,458,459	2,570,561,931
1925 ³	20,981	522,924	569,944,442	1,571,788,252	1,167,936,726	2,816,864,958
1926 ³	21,301	559,161	625,682,242	1,712,519,991	1,305,168,549	3,100,604,637
1927 ³	21,501	595,052	662,705,332	1,741,128,711	1,427,649,292	3,257,214,876
1928 ³	21,973	631,429	721,471,634	1,894,027,188	1,597,887,676	3,582,345,302
1929 ³	22,216	666,531	777,291,217	2,029,670,813	1,755,886,937	3,883,446,116
1930 ³	22,618	614,696	697,555,378	1,664,787,763	1,522,737,125	3,280,236,603
1931.....	23,083	528,640	587,566,990	1,221,911,982	1,252,017,248	2,555,126,448
1932.....	23,102	468,833	473,601,716	954,381,097	955,960,724	1,980,417,543
1933.....	23,780	468,658	436,247,824	967,788,928	919,671,181	1,954,075,785
1934.....	24,209	519,812	503,851,055	1,229,513,621	1,087,301,742	2,393,692,729
1935.....	24,034	556,664	559,467,777	1,419,146,217	1,153,485,104	2,653,911,209
1936.....	24,202	594,359	612,071,434	1,624,213,996	1,289,592,672	3,002,403,814
1937.....	24,834	660,451	721,727,037	2,006,926,787	1,508,924,867	3,625,459,500
1938.....	25,200	642,016	705,668,589	1,807,478,028	1,428,286,778	3,337,681,366
1939.....	24,805	658,114	737,811,153	1,836,159,375	1,531,051,901	3,474,783,528
1940.....	25,513	762,244	920,872,865	2,449,721,903	1,942,471,238	4,529,173,316
1941.....	26,293	961,178	1,264,862,643	3,296,547,019	2,605,119,788	6,076,308,124
1942.....	27,862	1,152,091	1,682,804,842	4,037,102,725	3,309,973,758	7,553,794,972
1943.....	27,652	1,241,068	1,987,292,384	4,690,493,083	3,816,413,541	8,732,860,999
1944.....	28,483	1,222,882	2,029,621,370	4,832,333,356	4,015,776,010	9,073,692,519
1945.....	29,050	1,119,372	1,845,773,449	4,473,668,847	3,564,315,899	8,250,368,866
1946.....	31,249	1,058,156	1,740,687,254	4,358,234,766	3,467,004,980	8,035,602,471
1947.....	32,734	1,131,750	2,085,925,966	5,534,280,019	4,292,055,802	10,081,026,580
1948.....	33,420	1,155,721	2,409,368,190	6,632,881,628	4,938,786,981	11,875,169,685
1949 ⁴	35,792	1,171,207	2,591,890,657	6,843,231,064	5,330,566,434	12,479,593,300
1950.....	35,942	1,183,297	2,771,267,435	7,538,534,532	5,942,058,229	13,817,526,381
1951.....	37,021	1,258,375	3,276,280,917	9,074,526,353	6,940,946,783	16,392,187,132
1952.....	37,929	1,288,382	3,637,620,160	9,146,172,494	7,443,533,199	16,982,687,035
1953.....	38,107	1,327,451	3,957,018,348	9,380,558,682	7,993,069,351	17,785,416,854
1954.....	38,028	1,267,966	3,896,687,691	9,241,857,554	7,902,124,137	17,554,527,504
1955.....	38,182	1,298,461	4,142,409,534	10,338,202,165	8,753,450,496	19,513,933,811

¹ For 1924-51, inclusive, the value added by manufacture is computed by subtracting the cost of fuel, electricity and materials from the gross value of products; for 1952 and 1953 the deduction is made from value of factory shipments and for 1954 and 1955 from the calculated value of production. Figures prior to 1924 are not comparable because statistics for cost of electricity are not available.

² In 1952 gross value of products was replaced by value of factory shipments; see text immediately preceding this table. ³ A change in the method of computing the number of wage earners in the years 1925 to 1930, inclusive, increased the number somewhat over that which the method otherwise used would have given. In 1931, however, the method in force prior to 1925 was re-adopted. ⁴ Newfoundland included from 1949 but fish processing in that Province was excluded in 1949 and 1950.

Provincial distribution of manufactures is shown for certain years from 1917 to 1955 in Table 2.

2.—Summary Statistics of Manufactures by Province, Significant Years 1917-55

Province and Year	Estab- lish- ments	Employees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture ¹	Gross Value of Products ²
	No.	No.	\$	\$	\$	\$
Newfoundland—						
1917.....	793	6,934	15,486,336	31,228,173	32,918,776	67,264,282
1953.....	939	10,375	26,604,908	44,972,021	57,784,697	106,524,603
1954.....	790	9,892	30,101,186	46,503,032	59,483,922	109,567,770
1955.....	785	10,361	28,604,468	49,914,856	60,586,922	115,579,036
Prince Edward Island—						
1917.....	411	1,556	663,251	3,087,621	1,750,135	4,837,756
1920.....	370	1,287	855,210	4,164,223	2,135,857	6,300,080
1929 ³	263	2,074	727,286	2,862,725	1,466,446	4,408,608
1933.....	249	991	529,684	1,590,834	1,126,826	2,775,787
1939.....	222	1,088	617,945	2,239,117	1,243,979	3,543,681
1944.....	241	1,786	1,694,763	6,993,510	3,570,835	10,713,644
1946.....	246	1,755	1,651,469	7,582,046	3,469,435	11,200,310
1949.....	251	1,747	2,133,555	13,537,144	4,338,320	18,123,200
1953.....	216	1,809	3,095,845	16,963,798	5,878,761	23,198,970
1954.....	209	1,774	3,000,211	17,001,551	6,044,749	23,469,743
1955.....	204	1,769	3,074,085	16,803,035	6,431,660	23,628,831
Nova Scotia—						
1917.....	1,337	25,252	18,838,051	102,415,215	57,565,703	159,980,918
1920.....	1,345	23,425	25,625,089	85,724,785	61,371,243	147,096,028
1929 ³	1,094	19,986	16,905,885	50,725,562	35,676,421	89,787,548
1933.....	1,277	12,211	9,604,680	25,354,319	19,988,257	47,912,432
1939.....	1,083	17,627	16,651,685	43,332,195	35,885,563	83,139,572
1944.....	1,281	37,812	59,940,411	103,463,123	93,376,638	204,421,664
1946.....	1,397	29,724	43,060,259	100,354,480	71,738,873	178,793,420
1949.....	1,480	29,311	54,686,577	135,841,899	102,294,298	247,592,389
1953.....	1,591	32,040	76,390,755	180,543,535	127,917,165	320,012,264
1954.....	1,526	29,611	71,740,240	161,294,873	129,777,850	300,072,733
1955.....	1,524	30,218	76,555,923	175,194,419	139,646,423	331,129,690
New Brunswick—						
1917.....	943	19,710	12,893,014	32,380,621	27,027,725	59,408,346
1920.....	901	19,007	19,266,821	60,812,641	45,803,164	106,615,805
1929 ³	803	17,952	15,127,716	39,800,366	26,640,786	68,145,012
1933.....	747	11,336	9,308,100	20,442,421	18,166,713	41,345,622
1939.....	803	14,501	13,659,162	35,617,614	27,041,195	66,058,151
1944.....	937	23,164	32,345,080	83,993,599	62,258,478	152,106,577
1946.....	993	22,732	33,151,919	96,389,299	67,783,377	170,753,741
1949.....	1,060	23,446	44,219,819	131,804,253	91,187,375	231,506,191
1953.....	1,094	24,471	59,753,045	163,797,711	120,617,345	295,750,419
1954.....	1,057	22,107	55,109,428	157,215,921	118,015,815	287,350,600
1955.....	1,052	22,434	56,683,345	160,905,219	120,808,214	294,829,050
Quebec—						
1917.....	7,032	188,043	141,008,616	385,212,984	380,882,409	766,095,393
1920.....	7,530	183,748	202,516,550	553,558,520	499,643,217	1,053,201,737
1929 ³	6,948	206,580	225,226,808	537,270,055	537,796,395	1,108,592,775
1933.....	7,856	157,481	134,696,386	292,560,568	288,504,782	604,496,078
1939.....	8,373	220,321	223,757,767	536,628,039	470,385,279	1,045,757,585
1944.....	9,656	424,115	668,156,053	1,494,253,053	1,350,519,134	2,929,685,183
1946.....	10,818	357,276	565,986,105	1,297,009,099	1,125,991,848	2,497,971,521
1949.....	11,579	390,275	809,579,270	2,027,793,643	1,651,629,668	3,788,497,123
1953.....	12,132	441,555	1,225,573,314	2,816,373,112	2,424,647,499	5,386,784,863
1954.....	12,191	424,095	1,214,661,400	2,806,248,363	2,448,027,538	5,395,786,664
1955.....	12,194	429,575	1,271,077,953	3,152,541,331	2,622,333,056	5,922,367,074
Ontario—						
1917.....	9,061	299,389	258,393,065	794,556,502	662,174,261	1,456,730,763
1920.....	9,113	295,674	362,941,317	1,071,843,374	792,267,562	1,864,110,936
1929 ³	9,348	328,533	406,622,627	1,056,530,202	916,971,816	2,020,492,433
1933.....	9,542	224,816	220,530,088	464,544,563	465,103,842	958,776,858
1939.....	9,824	318,871	378,376,209	907,011,461	791,428,569	1,745,674,707
1944.....	10,731	564,392	975,088,060	2,310,347,858	1,930,043,913	4,339,797,784
1946.....	11,424	498,120	845,216,547	2,001,900,592	1,659,284,622	3,754,523,701
1949.....	12,951	557,190	1,305,544,434	3,256,454,918	2,708,554,013	6,103,804,834
1953.....	13,114	634,564	2,017,982,218	4,560,134,562	4,130,126,462	8,786,504,990
1954.....	13,176	598,914	1,954,767,388	4,412,536,948	3,930,730,030	8,533,167,214
1955.....	13,278	613,872	2,088,905,627	5,014,225,423	4,426,654,771	9,617,642,961

¹ See footnote 1, Table 1.
see text on p. 634.

² In 1952 gross value of products was replaced by value of factory shipments;
³ See footnote 3, Table 1.

2.—Summary Statistics of Manufactures by Province, Significant Years 1917-55— concluded

Province or Territory and Year	Estab- lish- ments	Employees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture ¹	Gross Value of Products ²
	No.	No.	\$	\$	\$	\$
Manitoba—						
1917.....	732	18,930	16,513,423	69,715,149	42,280,801	111,995,950
1920.....	747	23,728	32,372,081	92,729,271	62,776,912	155,506,183
1929 ³	861	24,012	31,224,596	87,832,324	63,925,015	155,266,294
1933.....	1,010	18,871	18,687,430	44,570,998	37,390,275	83,934,777
1939.....	1,087	23,910	28,444,798	82,408,293	48,810,544	134,293,595
1944.....	1,290	40,937	62,758,081	226,234,925	120,339,926	352,334,594
1946.....	1,357	38,367	61,018,345	223,096,935	122,780,805	351,887,099
1949.....	1,520	41,956	86,088,380	299,101,498	167,335,495	474,681,912
1953.....	1,540	43,740	121,126,279	345,403,115	229,797,439	584,872,459
1954.....	1,522	41,224	116,454,886	328,827,609	232,487,743	571,408,772
1955.....	1,549	41,318	121,718,573	329,698,765	247,472,108	588,351,081
Saskatchewan—						
1917.....	560	6,230	5,403,332	22,040,674	13,894,179	35,934,853
1920.....	554	6,709	9,571,175	34,894,105	22,610,861	57,504,966
1929 ³	594	7,025	9,105,597	51,003,566	23,002,952	75,368,605
1933.....	573	4,782	4,848,763	19,124,030	11,478,634	31,559,387
1939.....	737	6,475	7,346,127	38,782,135	20,283,273	60,650,589
1944.....	1,054	12,361	17,703,103	131,215,017	40,833,333	175,349,234
1946.....	955	11,957	17,956,317	120,595,761	38,459,630	168,356,619
1949.....	962	10,841	22,273,942	164,349,341	47,356,949	215,742,708
1953.....	1,062	11,604	32,395,518	180,303,942	79,941,332	266,613,086
1954.....	1,010	11,526	33,509,833	169,326,001	104,560,398	280,733,784
1955.....	960	11,490	34,825,511	174,078,701	113,598,622	295,162,037
Alberta—						
1917.....	636	9,461	8,662,417	42,632,212	23,883,673	66,515,885
1920.....	666	10,955	15,210,628	56,139,646	29,812,891	85,952,537
1929 ³	736	12,216	14,585,734	62,500,175	36,824,969	100,966,196
1933.....	874	9,753	9,573,468	29,425,975	18,876,929	49,395,514
1939.....	961	12,712	14,977,700	53,151,149	32,618,153	87,474,080
1944.....	1,165	22,186	33,227,729	172,082,537	77,415,753	252,949,894
1946.....	1,315	22,649	34,939,088	169,425,176	83,735,011	257,031,867
1949.....	1,685	26,425	55,115,554	251,364,059	114,681,296	371,995,120
1953.....	2,072	33,082	92,605,153	346,221,162	199,660,428	555,814,827
1954.....	2,052	32,765	96,909,889	346,524,989	219,327,509	575,277,702
1955.....	2,126	34,846	106,548,815	366,022,853	263,308,701	641,148,235
British Columbia—						
1917 ⁴	1,133	37,943	35,426,675	87,637,833	71,673,094	159,310,927
1920 ⁴	1,306	34,360	49,135,005	125,405,084	104,851,641	230,256,725
1929 ^{3,4}	1,569	48,153	57,764,968	141,145,838	113,082,137	260,418,645
1933 ⁴	1,552	28,417	28,469,225	70,166,220	59,034,923	133,879,330
1939.....	1,710	42,554	53,881,994	136,655,872	103,263,292	247,948,600
1944.....	2,116	96,062	178,639,118	303,560,016	337,137,197	655,844,689
1946.....	2,731	75,484	137,506,645	335,708,533	293,352,652	644,527,898
1949.....	3,493	82,934	196,403,722	531,112,329	409,665,348	959,008,088
1953.....	4,317	93,844	300,921,318	724,495,754	615,686,215	1,366,823,690
1954.....	4,462	95,867	319,802,914	794,885,369	651,812,950	1,474,156,242
1955.....	4,486	102,408	353,810,727	895,973,668	750,877,508	1,679,344,816
Yukon and N.W.T.—						
1939.....	5	55	97,766	138,500	92,054	242,968
1944.....	12	67	118,972	189,718	280,803	489,256
1946.....	13	92	200,560	172,845	408,727	646,295
1949.....	18	148	359,068	643,807	604,896	1,377,453
1953.....	30	177	569,995	1,349,970	1,012,008	2,516,683
1954.....	31	191	630,316	1,492,898	1,855,633	3,536,300
1955.....	26	170	604,507	2,843,895	1,732,511	4,751,000

¹ See footnote 1, Table 1.² In 1952 gross value of products was replaced by value of factory shipments, see text on p. 634.³ See footnote 3, Table 1.⁴ Includes Yukon Territory.

The figures in Table 3 trace the tendencies in manufacturing industries as clearly as possible from 1917 to 1955. In analysing statistics of production and materials used, price changes should be borne in mind, particularly the inflation of values in the years immediately following World War I, the drop in prices of commodities during the depressions

following 1921 and 1930, and the increases again in World War II and the postwar period. The figure that shows most clearly the trend of development is the use of power, but interesting also are the trends of value added by manufacture per employee, and of average earnings.

3.—Significant Statistics of Manufactures for Certain Years 1917-55

Item		1917	1920	1929 ¹	1933
Establishments.....	No.	21,845	22,532	22,216	23,780
Total employees.....	"	606,523	598,893	666,531	468,658
Averages per establishment.....	"	27.8	26.6	30.0	19.7
Total earnings.....	\$	497,801,844	717,493,876	777,291,217	436,247,824
Averages per establishment.....	\$	22,788	31,843	34,988	18,345
Averages per employee.....	\$	821	1,198	1,166	931
Supervisory and office employees.....	No.	64,918	78,334	88,841	86,636
Averages per establishment.....	"	3.0	3.5	4.0	3.6
Total earnings.....	\$	85,353,667	141,837,361	175,553,710	139,317,946
Averages per employee.....	\$	1,315	1,811	1,976	1,608
Production workers.....	No.	541,605	520,559	577,690	382,022
Averages per establishment.....	"	24.8	23.1	26.0	16.1
Total earnings.....	\$	412,448,177	575,656,515	601,737,507	296,929,878
Averages per employee.....	\$	762	1,106	1,042	777
Cost of materials.....	\$	1,539,678,811	2,085,271,649	2,029,670,813	967,788,928
Averages per establishment.....	\$	70,482	92,547	91,361	40,668
Averages per employee.....	\$	2,539	3,482	3,045	2,065
Values added by manufacture ²	\$	1,281,131,980	1,621,273,348	1,755,386,937	919,671,181
Averages per establishment ²	\$	58,646	71,954	79,015	38,674
Averages per employee ²	\$	2,112	2,707	2,637	1,962
Gross value of products.....	\$	2,820,810,791	3,706,544,987	3,883,446,116	1,954,075,785
Averages per establishment.....	\$	129,128	164,501	174,804	82,173
Averages per employee.....	\$	4,651	6,189	5,286	4,170
Power employed.....	h.p.	1,658,475	2,068,875	3,855,648	4,135,008
Averages per establishment.....	"	76	92	174	174
Averages per production worker.....	"	3.06	3.97	6.67	10.82
		1939	1944	1954	1955
Establishments.....	No.	24,805	28,483	38,028	38,182
Total employees.....	"	658,114	1,222,882	1,267,966	1,298,461
Averages per establishment.....	"	26.5	42.9	33.3	34.0
Total earnings.....	\$	737,811,153	2,029,621,370	3,896,687,691	4,142,409,534
Averages per establishment.....	\$	29,744	71,257	102,449	108,491
Averages per employee.....	\$	1,121	1,660	3,073	3,190
Supervisory and office employees.....	No.	124,772	192,558	278,936	287,469
Averages per establishment.....	"	5.0	6.8	7.3	7.5
Total earnings.....	\$	217,839,334	418,065,594	1,075,101,215	1,147,142,086
Averages per employee.....	\$	1,746	2,171	3,854	3,990
Production workers.....	No.	533,342	1,030,324	989,030	1,010,992
Averages per establishment.....	"	21.5	36.2	26.0	26.5
Total earnings.....	\$	519,971,819	1,611,555,776	2,821,586,476	2,995,267,448
Averages per employee.....	\$	975	1,564	2,853	2,963
Cost of materials.....	\$	1,836,159,375	4,832,333,356	9,241,857,554	10,338,202,165
Averages per establishment.....	\$	74,024	169,657	243,028	270,761
Averages per employee.....	\$	2,790	3,952	7,289	7,982
Values added by manufacture ²	\$	1,531,051,901	4,015,776,010	7,902,124,137	8,753,450,496
Averages per establishment ²	\$	61,724	140,989	207,798	229,256
Averages per employee ²	\$	2,326	3,284	6,232	6,741
Gross value of products.....	\$	3,474,783,528	9,073,692,519	17,554,527,504 ³	19,513,933,811 ³
Averages per establishment.....	\$	140,084	318,565	461,621	511,077
Averages per employee.....	\$	5,280	7,420	13,845	15,029
Power employed.....	h.p.	5,045,287	6,468,439	10,397,703 ⁴	4
Averages per establishment.....	"	203	227	273	4
Averages per production worker.....	"	9.46	6.28	9.87	4

¹ A change in the method of computing the number of production workers in the years 1925 to 1930 inclusive increased the number somewhat over that which the method otherwise used would have given. There was therefore a proportionate reduction in the averages for 1925-30 per employee as compared with what these averages would have been under the other method. In 1931 however the method in force prior to 1925 was re-adopted. The figures for 1931 and later years are therefore comparable with those for 1924 and earlier years.

² Net value of products; see footnote 1, Table 1, p. 634.

³ In 1952 gross value of products was replaced by value of factory shipments; see text on p. 634.

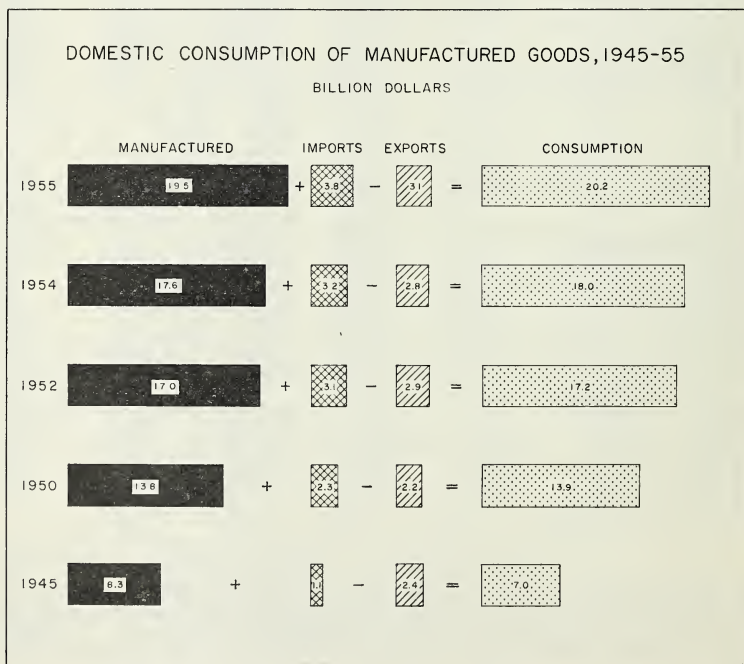
⁴ Collected only every five years; 1953 figure latest available.

Subsection 1.—Consumption of Manufactured Products

The value of all manufactured commodities made available for consumption in 1955 was \$20,152,020,318, a figure obtained by adding to the value of manufactured products the value of the imports of manufactured and partly manufactured goods, and deducting the value of the exports. More accurate statistics could be presented were it possible to exclude from the gross value of manufactured products the duplications involved when the products of one manufacturing establishment become the material worked upon in another. Iron, vegetable, wood and paper, non-ferrous metals and non-metallic minerals were, in that order, the leading groups in the value of finished products made available for consumption in 1955.

Animal, wood and paper, and non-ferrous metal products were manufactured in Canada in greater quantities than required for home consumption, providing export balances in these groups.

On balance, Canada in the past imported large quantities of iron and steel, textiles, chemicals and non-metallic mineral products despite large home production. The expansion of the iron and steel, chemical and non-metallic mineral products industries will enable Canada to meet more of her requirements for home consumption and to export greater quantities in the future.



4.—Consumption of Manufactured Products, Significant Years 1929-53 and by Industrial Group 1954 and 1955

Year and Industrial Group	Gross Value of Products Manufactured ²	Manufactured and Partly Manufactured Goods ¹		Value of Manufactured Products Available for Consumption
		Value of Net Imports	Value of Domestic Exports	
	\$	\$	\$	\$
1929.....	3,883,446,116	939,130,201	686,876,071	4,135,700,246
1933.....	1,984,075,785	298,068,344	365,232,113	1,886,912,016
1939.....	3,474,783,528	542,364,930	646,853,938	3,370,264,520
1944.....	9,073,692,519	1,302,413,996	2,668,575,781	7,707,530,734
1946.....	8,035,692,471	1,390,123,100	1,701,677,026	7,724,138,545
1949.....	12,479,593,300	2,043,583,929	2,017,055,615	12,506,121,614
1951.....	16,392,187,132	3,034,709,829	2,749,091,256	16,677,805,705
1952.....	16,982,687,035	3,125,381,333	2,892,543,945	17,215,524,423
1953.....	17,785,416,854	3,519,418,503	2,781,269,785	18,523,565,572
1954³				
Vegetable products.....	2,563,927,081	258,852,898	203,930,909	2,618,849,070
Animal products.....	1,813,185,823	46,371,900	110,792,891	1,748,764,832
Textiles and textile products.....	1,378,303,384	254,592,092	19,588,401	1,613,307,075
Wood and paper products.....	3,430,311,344	158,066,586	1,317,199,057	2,271,178,873
Iron and its products.....	3,651,360,402	1,276,155,153	260,972,997	4,666,542,558
Non-ferrous metal products.....	2,127,716,961	325,752,287	558,573,894	1,894,895,354
Non-metallic mineral products.....	1,456,119,348	248,373,012	94,613,695	1,609,878,665
Chemicals and allied products.....	882,604,171	218,482,614	161,293,282	939,793,503
Miscellaneous industries.....	250,998,990	452,889,139	84,608,834	619,279,295
Totals, 1954.....	17,554,527,504	3,239,535,681	2,811,573,960	17,982,489,225
1955³				
Vegetable products.....	2,699,898,995	282,174,622	200,426,389	2,781,647,228
Animal products.....	1,824,360,045	54,664,201	106,050,545	1,772,973,701
Textiles and textile products.....	1,507,216,437	290,624,022	21,612,958	1,776,227,501
Wood and paper products.....	3,767,432,484	184,806,737	1,455,575,038	2,496,664,183
Iron and its products.....	4,174,966,314	1,545,144,355	298,968,319	5,421,142,350
Non-ferrous metal products.....	2,589,595,867	357,935,238	666,657,736	2,280,873,369
Non-metallic mineral products.....	1,674,943,300	288,964,669	113,745,079	1,850,162,890
Chemicals and allied products.....	993,756,785	258,423,572	210,040,071	1,042,140,286
Miscellaneous industries.....	281,763,584	518,475,528	70,050,302	730,188,810
Totals, 1955.....	19,513,933,811	3,781,212,944	3,143,126,437	29,152,020,318

¹ Figures for the years 1929 and 1933 are for the fiscal years ended Mar. 31 of the following years; for 1939-55 they are for the calendar year. Net imports are total imports less foreign products re-exported. ² In 1952 gross value of products was replaced by value of factory shipments: see text on p. 634. ³ Consumption figures for the major standard industrial classification groups (see p. 646) cannot be calculated because statistics of imports and exports are compiled on the component material classification basis.

Subsection 2.—Value and Volume of Manufactured Production

Value of Manufactured Production.—In the interpretation of manufacturing values over a number of years variations in the level of prices must be borne in mind. In recent years owing to large changes in prices, unadjusted value series used in isolation have become increasingly inadequate as indicators of economic trends. Consequently interest has shifted to measures of volume. The range of prices since 1929, on the base period 1935-39 = 100, is as follows:—

Year	General Wholesale Price Index	Price Index of Fully or Chiefly Manufactured Products
1929.....	124.6	123.7
1933.....	87.4	93.3
1939.....	99.2	101.9
1944.....	130.6	129.1
1946.....	138.9	138.0
1949.....	198.3	199.2
1952.....	226.0	230.7
1953.....	220.7	228.8
1954.....	217.0	224.2
1955.....	218.9	224.5

Volume of Manufactured Production.—Real income is ultimately measured in goods and services so that the growth of the volume of manufacturing production, as distinguished from its value, becomes a matter of great significance. The important thing to know is whether consumers are getting more goods and services and not whether they are expending more dollars and cents. The field of industrial production, because of its dominating position in the national economy, has attracted increasing attention and this in turn has resulted in the need for more accurate measurements of physical output.

During the past few years the Dominion Bureau of Statistics has been engaged in the reconstruction of the index of industrial production* which was first published in 1926 and later subjected to several major revisions. The latest reconstruction was made possible by the availability of a great deal of basic data. Annual statistics valuable for this project have been collected by the Bureau from the end of World War I to the present and the scope of the monthly information has been greatly expanded. Applying methods developed through the experience of the past quarter-century, it has been possible to compute an index with a fair measure of accuracy from 1935 to the present.

The manufacturing sector is divided, at the major group level, into durable manufactures and non-durable manufactures, for the reason that the movement of durable goods normally varies from that of non-durables. There tends to be greater fluctuation in durables from prosperity to depression, the demand for non-durables being more constant.

5.—Index of the Total Volume of Manufactured Production classified on the Basis of Durable and Non-durable Goods 1946-55

(1935-39=100)

NOTE.—Figures for the years 1935-45 are given in the 1955 Year Book, p. 641.

Year	Non-durable Manufactures	Durable Manufactures	All Manufactures	Year	Non-durable Manufactures	Durable Manufactures	All Manufactures
1946.....	180.2	205.1	189.9	1951.....	214.0	285.9	242.1
1947.....	191.2	233.5	207.7	1952.....	215.2	294.9	246.3
1948.....	197.1	244.4	215.5	1953.....	224.1	323.9	263.0
1949.....	198.2	246.3	217.0	1954.....	221.7	297.7	251.4
1950.....	208.3	259.1	228.1	1955.....	235.2	324.8	270.1

The period 1946-55 was characterized by unprecedented industrial expansion. The end of hostilities in 1945 and the subsequent reconversion to peacetime production were attended by declines in output but the upward trend was resumed in 1947. The rate of advance slackened moderately in 1948 and 1949 but regained most of its 1947 impetus in 1950 when the outbreak of hostilities in Korea resulted in heavy anticipatory buying on the part of consumers and in growing expenditures for national defence. A remarkable feature is that in 1952 the index of the volume of manufacturing production stood at 246.3 having surpassed the record wartime level of 242.3 established in 1944. The index continued to advance in 1953, dropped somewhat in 1954 but reached a new high in 1955.

Durable Manufactures.—The volume index of durable manufactures reached a peak of 340.1 in 1944 but declined sharply to 205.1 in 1946. Since then the advance has been steady, except for 1954, and the index stood at 324.8 in 1955. Over the 1946-55 period, the greatest gains were shown by electrical apparatus and supplies and non-metallic mineral products.

All groups in the durable goods sector with the exception of transportation equipment recovered in 1955 from the downward adjustment experienced in 1954. Non-metallic mineral products were up 15.1 p.c., iron and steel products 14.1 p.c., electrical apparatus and supplies 12.0 p.c., wood products 10.8 p.c., and non-ferrous metal products 9.8 p.c.

* For a description of the methods used in constructing the index and a description of its scope, see DBS Reference Paper No. 34, *Revised Index of Industrial Production, 1935-1951*.

The transportation equipment group was slightly lower than in 1954. Although the volume of output of the automobile industry was 29 p.c. higher, the lower levels at which the shipbuilding, aircraft and railway rolling-stock industries operated more than offset that increase, leaving a decline of 1.2 p.c. for the group as a whole as compared with 1954 and a 20.0-p.c. decline from the high level of 1953. The iron and steel group, despite the recovery made in 1955, was still about 1.8 p.c. below the record level of 1952.

6.—Indexes of the Volume of Manufactured Production of the Groups Comprised within the Durable Manufactures Classification 1946-55

(1935-39=100)

NOTE.—Indexes for the years 1935-45 are given in the 1954 Year Book, p. 630.

Year	Wood Products	Iron and Steel Products	Transportation Equipment	Non-ferrous Metal Products	Electrical Apparatus and Supplies	Non-metallic Mineral Products
1946.....	175.0	222.6	221.5	160.1	247.3	221.4
1947.....	195.6	249.9	239.5	182.8	316.8	269.8
1948.....	200.7	270.4	232.6	201.6	328.5	283.7
1949.....	202.3	264.5	243.9	200.5	333.8	284.4
1950.....	215.1	263.2	262.2	212.8	367.6	314.6
1951.....	220.6	292.2	315.0	234.7	392.3	342.1
1952.....	214.1	292.7	373.1	232.2	393.1	346.1
1953.....	235.3	290.8	436.3	243.3	486.7	399.0
1954.....	230.3	251.8	354.9	246.7	477.8	409.5
1955.....	255.1	287.3	350.7	270.9	535.2	471.5

Non-durable Manufactures.—The trend of output in the non-durable sector of manufacturing from 1946 to 1955 was visibly smoother than in the durable sector. Except for 1954 there has been no interruption in the upward movement of production during this period. Unlike durable goods, non-durable commodities are mostly consumer goods and are less influenced by sudden changes in the international situation or the capital investment programs of producers and governments. By 1955 the non-durables index of output had reached 235.2, the highest on record. All groups reported increased activity in 1955 as compared with 1954, the greatest increases being reported by rubber goods and textiles.

7.—Indexes of the Volume of Manufactured Production of the Groups Comprised within the Non-durable Manufactures Classification 1946-55

(1935-39=100)

NOTE.—Indexes for the years 1935-45 are given in the 1954 Year Book, p. 629.

Year	Foods	Beverages	Tobacco and Tobacco Products	Rubber Products	Leather Products	Textile Products (except Clothing)
1946.....	177.2	234.4	204.4	158.0	167.9	161.7
1947.....	181.5	249.4	211.9	230.7	148.7	172.9
1948.....	183.0	270.9	215.8	227.6	129.6	180.2
1949.....	180.3	285.7	224.4	208.5	133.5	186.0
1950.....	183.6	282.9	227.5	251.9	126.8	212.4
1951.....	188.7	297.7	212.2	264.3	117.0	208.6
1952.....	195.5	323.6	242.3	246.4	128.0	184.1
1953.....	194.0	336.6	269.6	264.2	136.7	187.6
1954.....	198.1	328.6	279.3	252.6	128.6	161.0
1955.....	203.0	358.3	303.3	296.3	136.7	185.3

7.—Indexes of the Volume of Manufactured Production of the Groups Comprised within the Non-durable Manufactures Classification 1946-55—concluded

Year	Clothing (Textile and Fur)	Paper Products	Printing, Publishing and Allied Trades	Products of Petroleum and Coal	Chemicals and Allied Products
1946.....	152.9	188.9	143.8	167.4	237.7
1947.....	147.7	207.4	163.3	181.2	245.5
1948.....	156.0	217.7	177.2	199.0	243.2
1949.....	159.4	213.7	183.8	218.0	239.5
1950.....	155.7	230.4	195.3	243.5	253.7
1951.....	149.7	247.8	194.7	274.9	267.8
1952.....	154.4	235.5	192.4	295.1	272.4
1953.....	167.3	244.7	204.8	324.3	284.4
1954.....	145.4	254.4	214.8	336.9	285.0
1955.....	149.0	267.7	219.5	385.4	291.8

Section 2.—Manufactured Production Variously Classified

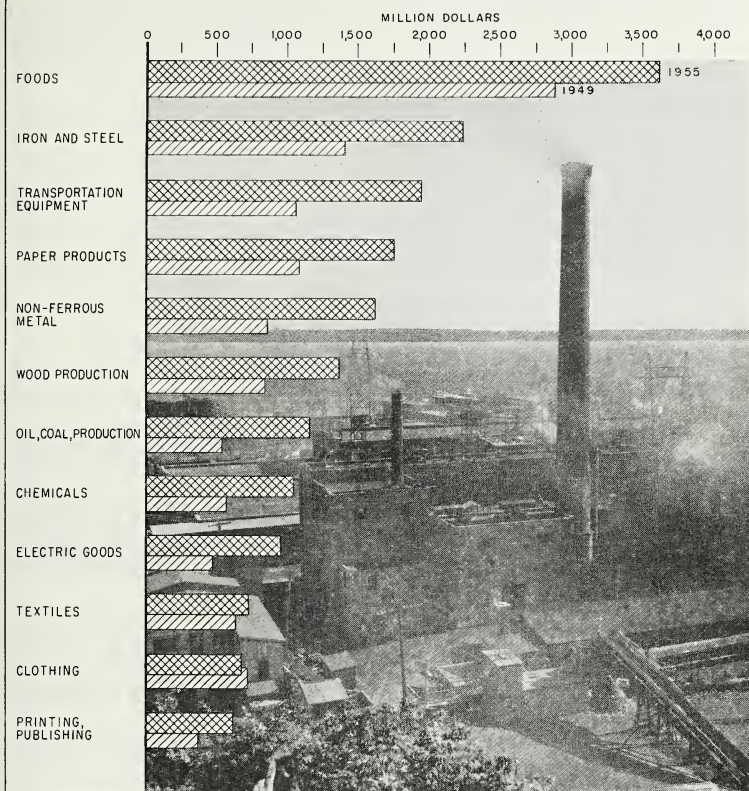
Subsection 1.—Manufactures classified by Industrial Groups and Individual Industries

Current Changes in Manufacturing Production.—The manufacturing industries of Canada during 1955 made a rapid recovery from the downward adjustment experienced in 1954. The selling value of factory shipments at \$19,513,933,811 was the highest on record and exceeded by 9.7 p.c. the previous high mark attained in 1953. In employment, however, the record was not so impressive. Although there was an increase of 2.4 p.c. in the number of employed in 1955 as compared with the previous year, the number still fell short, by about 29,000, of the record number of 1,327,451 employed in 1953. Salaries and wages paid at \$4,142,409,534 and value added by manufacture at \$8,753,450,496 were the highest on record, exceeding the previous high of 1953 by substantial margins.

The improvement in manufacturing operations that occurred during 1955 was the result of three main factors. First was the accelerated spending on capital goods, such as construction and machinery and equipment of all kinds, which rose from \$5,620,000,000 in 1954 to \$6,230,000,000 in 1955, an increase of 11.0 p.c. This stimulated the durable goods industries to a marked degree, and was reflected in the increased output of pig iron which rose from 2,211,029 tons in 1954 to 3,215,367 tons in 1955, steel ingots and castings from 3,195,030 tons to 4,534,672 tons, aluminum from 557,897 tons to 612,543 tons, nickel from 166,299 tons to 174,928 tons, cement from 22,437,477 bbl. to 25,168,464 bbl., and motor vehicles from 352,109 units to 452,114 units. The second factor was the improvement in the export demand for many Canadian manufactured commodities. Exports of newsprint, wood pulp, planks and boards, shingles, veneer and plywood, aluminum, nickel, copper, zinc, automobile parts and fertilizers were all substantially higher in 1955 as compared with 1954. Exports of whisky, farm implements and artificial crude abrasives were at about the same level while exports of wheat flour and aircraft were considerably lower. The third factor was the impact on the consumer goods industries of the increase of about 400,000 in population as well as by the rise in labour income.

Demands stemming from population growth and a rising standard of living have been noticeable at all levels. In food processing, a steady up-grading in the quality of foods sold on the domestic market has been even more important than population growth. The two together have almost doubled the dollar sales of processed foods in this country since 1945. And at the intermediate level other important changes have taken place. Many of Canada's new chemical plants, for example, have been built with the domestic consumer market in mind. Frequently using petroleum or natural gas as a source of raw material, they have gone a long way towards making Canada independent of imports in such categories as vanillin, nylon and rayon intermediates, and plastics for packaging and other uses.

FACTORY VALUE OF GOODS, LEADING INDUSTRIAL GROUPS, 1949 AND 1955



8.—Percentage Variations in Employment, Earnings and Gross Value of Products in the Main Industrial Groups, 1955 Compared with 1954

Industrial Group	1955 Compared with 1954		
	Number of Employees	Earnings	Selling Value of Factory Shipments
	p. c.	p. c.	p. c.
Foods and beverages.....	+ 1.2	+ 4.6	+ 1.5
Tobacco and tobacco products.....	+ 0.6	+ 5.7	+11.4
Rubber products.....	+ 4.9	+ 9.3	+22.0
Leather products.....	+ 0.6	+ 2.7	+ 5.6
Textiles.....	+ 7.1	+10.3	+14.6
Knitting mills.....	+ 0.2	- 0.8	+ 2.9

8.—Percentage Variations in Employment, Earnings and Gross Value of Products in the Main Industrial Groups, 1955 Compared with 1954—concluded

Industrial Group	1955 Compared with 1954		
	Number of Employees	Earnings	Selling Value of Factory Shipments
	p.c.	p.c.	p.c.
Clothing.....	1	+ 2.6	+ 5.2
Wood products.....	+ 3.7	+ 9.7	+14.0
Paper products.....	+ 2.7	+ 6.3	+ 7.6
Printing, publishing and allied trades.....	+ 1.4	+ 6.5	+ 7.4
Iron and steel products.....	+ 4.6	+10.3	+14.8
Transportation equipment.....	- 1.2	+ 2.4	+13.8
Non-ferrous metal products.....	+ 5.6	+10.4	+28.7
Electrical apparatus and supplies.....	+ 1.6	+ 2.1	+11.4
Non-metallic mineral products.....	+10.6	+14.1	+18.1
Products of petroleum and coal.....	- 0.4	+ 4.0	+18.7
Chemicals and allied products.....	+ 0.5	+ 4.5	+11.2
Miscellaneous industries.....	+ 1.4	+ 4.1	+12.2
Averages, All Groups.....	+ 2.4	+ 6.4	+11.2

¹ Less than 0.1 p.c. variation.

9.—Summary Statistics of Manufactures by Industrial Group 1945-55

NOTE.—Figures for 1946, 1948 and 1950 will be found in the 1952-53 Year Book, pp. 611-613; those for 1952 are given at pp. 645-647 of the 1955 edition and for 1953 at pp. 636-638 of the 1956 edition.

Industrial Group and Year	Estab-lish-ments	Em-ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Gross Value of Products ¹
	No.	No.	\$	\$	\$	\$
Foods and Beverages—						
1945.....	8,872	156,396	224,908,882	1,336,820,028	558,247,045	1,921,774,601
1947.....	8,869	167,865	276,245,015	1,656,529,086	695,092,932	2,383,975,675
1949.....	8,558	170,024	332,536,319	2,009,246,062	834,017,547	2,882,581,753
1951.....	8,388	172,493	392,859,435	2,419,206,798	985,240,884	3,450,030,515
1954.....	8,090	177,883	477,058,728	2,334,166,626	1,181,648,171	3,562,546,744
1955.....	8,134	180,085	498,786,577	2,319,782,949	1,257,652,677	3,614,315,616
Tobacco and Tobacco Products—						
1945.....	86	12,164	15,738,041	79,176,519	42,985,992	122,543,932
1947.....	91	10,880	16,234,772	97,121,002	49,221,094	146,793,011
1949.....	72	10,686	21,896,378	113,357,196	58,529,226	172,420,213
1951.....	62	9,826	24,438,218	119,590,053	59,033,325	179,177,093
1954.....	53	9,469	27,868,939	144,960,769	79,439,243	225,340,976
1955.....	56	9,529	29,446,891	163,027,885	88,652,932	250,933,785
Rubber Products—						
1945.....	55	23,490	39,111,477	78,500,892	98,836,225	181,413,226
1947.....	60	23,475	46,613,893	82,934,625	110,673,007	196,307,734
1949.....	62	20,729	48,172,207	73,895,718	101,705,513	178,503,559
1951.....	67	23,054	64,357,696	146,951,650	161,184,980	311,678,489
1954.....	73	20,894	67,476,405	106,501,858	149,073,979	264,184,787
1955.....	82	21,913	73,774,964	137,074,770	187,029,017	322,412,379
Leather Products—						
1945.....	706	34,123	43,268,635	95,006,015	71,297,713	167,888,463
1947.....	792	35,724	52,628,612	123,894,474	86,646,061	212,430,165
1949.....	747	34,900	59,699,886	117,869,462	91,157,684	210,804,174
1951.....	711	31,578	59,668,764	135,114,110	84,885,048	221,882,794
1954.....	673	30,748	67,161,757	101,250,853	102,339,751	206,512,812
1955.....	646	30,575	68,970,276	108,961,619	107,215,340	218,043,090
Textile Products (except Clothing)—						
1945.....	664	66,011	88,372,939	217,289,281	165,689,522	391,182,025
1947.....	747	73,979	116,228,736	289,986,732	215,170,493	514,844,838
1949.....	847	77,773	156,166,554	339,644,950	285,641,367	636,824,130
1951.....	892	81,710	185,030,459	495,304,102	337,936,447	846,477,303
1954.....	975	64,581	170,196,140	350,113,694	275,492,879	640,870,047
1955.....	977	69,144	187,805,044	408,890,576	314,533,385	734,515,445

For footnote, see end of table p. 646.

9.—Summary Statistics of Manufactures by Industrial Group 1945-55—continued

Industrial Group and Year	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Gross Value of Products ¹
	No.	No.	\$	\$	\$	\$
Clothing (Textile and Fur)—						
1945.....	2,676	99,959	131,478,496	251,899,847	222,307,384	476,754,319
1947.....	3,121	110,329	166,951,727	311,018,817	300,527,093	614,594,703
1949.....	3,058	117,752	206,512,782	371,128,833	352,741,236	727,498,836
1951.....	3,083	115,733	222,364,947	405,347,118	370,672,177	780,012,025
1954.....	3,080	111,315	239,072,710	410,078,242	383,538,744	801,533,118
1955.....	2,944	111,344	243,644,687	435,588,452	401,110,652	839,548,665
Wood Products—						
1945.....	7,656	93,209	119,833,932	240,482,275	208,979,657	454,447,165
1947.....	9,744	120,434	186,467,946	398,854,196	365,050,223	771,403,332
1949.....	11,191	121,632	224,902,644	436,637,453	393,928,758	840,355,634
1951.....	11,975	131,278	283,062,074	610,807,577	529,300,377	1,153,376,772
1954.....	12,165	128,931	323,122,214	623,756,753	566,186,899	1,205,959,905
1955.....	11,804	133,673	354,439,897	723,815,493	631,857,981	1,375,343,554
Paper Products—						
1945.....	475	60,819	109,627,174	255,265,326	241,121,150	536,859,861
1947.....	502	73,445	168,632,394	410,456,570	443,374,435	911,238,813
1949.....	524	76,471	208,348,621	494,300,501	532,288,636	1,093,060,326
1951.....	547	82,880	276,521,006	683,488,653	827,924,962	1,589,842,162
1954.....	569	87,370	331,556,026	742,032,309	802,280,157	1,630,162,601
1955.....	580	89,750	349,777,049	793,008,069	867,261,587	1,754,098,505
Printing, Publishing and Allied Trades—						
1945.....	2,312	43,565	74,257,775	52,655,848	132,385,988	186,945,134
1947.....	2,458	52,096	101,611,652	82,585,466	178,067,051	263,632,152
1949.....	3,866	61,834	141,489,984	121,684,351	250,162,704	377,908,182
1951.....	4,019	64,694	170,828,730	152,753,412	295,642,569	452,142,515
1954.....	4,227	68,614	220,275,989	188,725,630	384,791,305	577,355,291
1955.....	4,494	69,602	234,579,858	199,161,743	415,668,242	619,828,786
Iron and Steel Products—						
1945.....	1,903	169,278	313,966,173	395,624,098	527,473,688	952,482,150
1947.....	2,200	162,399	334,044,246	451,289,335	580,342,444	1,064,654,410
1949.....	2,347	163,622	413,227,553	619,499,256	760,934,249	1,419,145,725
1951.....	2,435	183,323	547,314,615	800,565,510	991,334,800	1,904,650,130
1954.....	2,801	173,098	605,526,529	829,237,679	1,085,231,674	1,954,230,964 ²
1955.....	2,895	181,700	667,657,079	1,005,246,993	1,199,245,953	2,242,717,918 ²
Transportation Equipment—						
1945.....	504	154,844	326,748,794	498,241,686	523,910,119	1,034,666,913
1947.....	562	104,348	230,898,680	426,573,091	366,151,761	803,611,372
1949.....	596	104,750	270,852,111	584,064,330	466,529,164	1,063,211,331
1951.....	599	122,517	368,106,433	870,178,794	657,424,400	1,541,589,828
1954.....	602	133,432	479,079,750	986,721,281	701,600,725	1,713,962,985
1955.....	594	131,789	490,434,996	1,117,768,836	809,748,007	1,950,410,035
Non-ferrous Metal Products—						
1945.....	436	44,221	81,889,942	337,872,041	180,653,076	548,853,026
1947.....	503	43,344	91,046,568	434,517,197	201,162,856	668,074,514
1949.....	532	44,698	114,591,106	537,218,214	289,125,045	867,043,028
1951.....	536	50,114	150,733,704	797,412,763	406,616,836	1,253,599,168
1954.....	573	50,494	182,191,321	717,966,073	486,933,852	1,263,774,817
1955.....	581	53,311	201,109,879	974,792,188	590,744,048	1,626,980,855
Electrical Apparatus and Supplies—						
1945.....	247	44,129	76,468,795	92,041,030	135,919,899	230,531,874
1947.....	296	52,736	103,891,016	162,131,266	200,859,040	366,506,203
1949.....	365	55,916	137,278,521	212,460,413	269,341,983	486,286,353
1951.....	373	67,626	194,749,038	316,561,307	353,602,872	676,008,959
1954.....	457	75,075	258,509,601	396,583,427	462,960,141	863,942,144
1955.....	468	76,244	264,031,474	477,655,753	469,918,651	962,615,012

For footnotes, see end of table, p. 646.

9.—Summary Statistics of Manufactures by Industrial Group 1945-55—concluded

Industrial Group and Year	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Gross Value of Products ¹
	No.	No.	\$	\$	\$	\$
Non-metallic Mineral Products—						
1945.....	700	20,269	32,959,877	41,488,955	76,318,456	130,704,796
1947.....	863	26,443	50,456,143	66,266,546	115,277,990	201,786,910
1949.....	1,020	28,139	64,594,354	78,401,065	143,872,615	246,457,799
1951.....	1,042	31,522	86,078,972	109,011,701	195,348,829	334,875,398
1954.....	1,160	35,229	114,849,079	145,120,516	256,951,758	435,208,000
1955.....	1,171	38,949	131,006,731	174,489,301	301,656,877	514,118,801
Products of Petroleum and Coal—						
1945.....	80	11,532	22,904,418	188,899,911	65,637,131	270,166,984
1947.....	80	12,769	28,689,932	257,420,851	84,073,746	361,333,008
1949.....	77	14,552	39,783,500	391,036,128	117,819,090	533,730,719
1951.....	82	15,598	51,947,890	497,982,695	179,872,590	709,550,035
1954.....	104	17,559	69,681,725	625,411,385	358,372,309	1,020,911,348
1955.....	106	17,486	72,436,559	704,384,995	417,349,989	1,160,824,499
Chemicals and Allied Products—						
1945.....	986	61,339	107,050,824	228,855,956	252,944,165	498,630,798
1947.....	1,046	39,237	78,993,517	238,310,157	234,056,973	488,307,293
1949.....	1,037	41,328	100,690,662	280,008,945	288,171,551	587,398,215
1951.....	1,037	45,664	131,310,151	366,957,695	384,026,141	776,489,391
1954.....	1,116	51,603	177,311,960	437,051,091	476,125,328	935,724,880
1955.....	1,126	51,856	185,267,943	480,104,190	528,928,509	1,044,079,000
Miscellaneous Industries—						
1945.....	692	24,024	37,187,275	83,549,139	59,608,689	144,523,599
1947.....	800	22,247	36,291,117	44,390,608	65,708,603	111,532,447
1949.....	893	26,401	51,147,475	59,778,187	91,600,066	156,363,321
1951.....	1,173	28,756	66,908,755	87,292,415	120,899,546	210,804,555
1954.....	1,360	31,071	85,748,818	102,179,368	149,157,222	252,306,085
1955.....	1,524	31,511	89,239,630	114,448,353	164,876,649	283,147,866

¹ In 1952 gross value of products was replaced by value of factory shipments; see text on pp. 633-634. ² Not comparable with previous years because of major changes in concept affecting the data for the primary iron and steel industry.

Detailed Statistics by Group and Individual Industries.—Table 10 presents for 1955 detailed statistics regarding the individual industries under which all industrial plants in Canada are classified. The industries are assembled under seventeen main groups according to the Standard Industrial Classification.

In interpreting the statistics of individual industries it should be noted that the figures on employment, production, etc., do not refer to individual products but to all the products produced by an industry. For example the value of production of the confectionery industry amounting to \$112,630,426 in 1955 does not imply that this was the value of confectionery produced. What it means is that the firms whose principal product was confectionery had a value of production of \$112,630,426. This figure, in addition to confectionery, includes all the subsidiary products made by these firms, such as ice cream which was valued at \$3,505,761 and bread and other bakery products valued at \$1,596,455. Confectionery is also produced as a subsidiary product by firms credited to other industrial classifications. The quantities and values of the principal individual commodities produced are given in Table 11. Commodities produced in small quantities are not included, but the list covers approximately 75 p.c. of total production.

10.—Principal Statistics of Individual Manufacturing Industries 1955

NOTE.—Comparable figures for 1954 have not been published in the Canada Year Book but are available from DBS publication *General Review of the Manufacturing Industries of Canada, 1954*.

Group and Industry	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Foods and Beverages	8,134	180,085	498,786,577	2,319,782,949	1,257,652,677	3,614,315,616
Bakery Products—						
Biscuits.....	43	6,124	14,611,402	34,000,392	36,312,264	71,677,784
Bread and other bakery products.....	2,618	34,416	87,760,004	133,299,250	146,133,537	289,019,294
Beverages—						
Breweries.....	58	8,368	34,387,685	48,677,904	158,370,826	210,571,853
Carbonated beverages.....	540	7,605	20,642,753	37,712,394	76,015,420	116,582,499
Distilled liquors.....	20	5,179	17,647,985	44,385,387	86,402,608	129,629,813
Wines.....	20	538	1,906,992	5,442,759	7,377,747	12,396,135
Canning and Processing—						
Fish processing.....	574	14,626	26,320,382	101,921,132	55,304,122	159,888,395
Fruit and vegetable prepara- tions.....	459	17,151	38,939,576	143,958,545	97,208,879	234,075,326
Dairy Products—						
Butter and cheese.....	1,423	20,444	56,670,536	315,926,042	103,069,896	427,092,300
Cheese, process.....	18	1,184	3,401,008	20,003,518	5,518,648	25,280,990
Concentrated milk products.....	29	1,476	4,312,934	53,419,184	15,337,918	71,583,531
Dairy products, other.....	44	846	2,264,042	6,563,310	5,161,113	12,099,114
Grain Mill Products—						
Feeds, stock and poultry, prepared.....	769	6,376	16,659,900	147,732,071	38,987,058	189,799,395
Feed mills.....	605	1,536	2,693,525	19,978,186	5,404,160	26,048,402
Flour mills.....	77	4,853	15,478,817	185,004,008	35,538,808	221,894,538
Foods, breakfast.....	17	1,262	4,139,486	10,497,068	17,638,670	28,584,222
Meat Products—						
Animal oils and fats.....	15	351	1,148,021	3,141,751	2,458,548	5,912,675
Sausage and sausage casings.....	93	1,497	4,333,462	16,712,881	9,686,079	26,760,222
Slaughtering and meat packing.....	153	23,655	83,006,946	627,479,460	178,578,637	809,467,773
Other Food Industries—						
Confectionery.....	227	9,124	21,293,169	61,152,885	50,347,912	112,630,426
Macaroni and kindred products.....	17	672	1,758,135	5,971,292	3,846,453	9,896,911
Sugar refining.....	11	3,376	11,548,086	87,782,720	33,002,905	119,672,837
Miscellaneous food preparations.....	304	9,426	27,861,731	209,020,810	89,950,469	303,751,181
Tobacco and Tobacco Products ...	56	9,529	29,446,891	163,027,885	88,652,932	250,933,785
Tobacco, cigars and cigarettes.....	40	7,470	25,118,846	84,438,935	78,959,320	162,382,718
Tobacco, processing and packing.....	16	2,059	4,328,045	78,588,950	9,693,612	88,551,067
Rubber Products	82	21,913	73,774,964	137,074,770	187,029,017	322,412,379
Rubber goods (including foot- wear).....	82	21,913	73,774,964	137,074,770	187,029,017	322,412,379
Leather Products	646	30,575	68,970,276	108,961,619	107,215,340	218,043,090
Footwear, leather.....	257	19,829	42,839,930	59,510,235	66,128,612	125,552,623
Gloves and mittens, leather.....	72	1,711	3,125,734	5,039,888	4,450,158	9,628,042
Leather tanning.....	54	3,821	11,364,476	27,695,719	19,244,679	48,398,161
Belting, leather.....	10	136	426,779	600,456	685,446	1,366,333
Boot and shoe findings, leather.....	31	600	1,438,651	3,276,362	2,190,545	5,562,101
Miscellaneous leather goods, n.e.s.....	222	4,478	9,774,706	12,838,959	14,515,900	27,535,830
Textiles	977	69,144	187,805,044	408,890,576	314,533,385	734,515,445
Cotton Goods—						
Cotton thread.....	11	939	2,274,593	5,098,589	4,974,189	9,861,986
Cotton yarn and cloth.....	50	21,537	56,411,050	149,561,429	77,291,220	229,684,041
Miscellaneous cotton goods.....	15	622	1,800,369	5,042,036	3,286,848	8,499,301
Woolen Goods—						
Carpets, mats and rugs.....	18	1,527	4,253,066	7,726,179	7,192,756	15,587,015
Woolen cloth.....	70	6,633	16,522,702	32,372,593	24,535,275	58,773,448
Woolen yarn.....	44	2,937	7,080,950	19,639,928	11,168,868	31,529,947
Miscellaneous woollen goods.....	37	2,227	6,873,072	17,985,902	14,479,223	33,020,133
Synthetic textiles and silk.....	48	15,408	46,927,250	69,895,625	86,031,246	159,233,708
Other Primary Textiles—						
Dyeing and finishing of textiles.....	56	2,062	6,058,936	4,121,238	9,496,406	14,281,378
Narrow fabrics.....	47	2,060	4,990,582	7,794,972	9,510,878	17,406,326

10.—Principal Statistics of Individual Manufacturing Industries 1955—continued

Group and Industry	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Textiles—concluded						
Other Textile Industries—						
Automobile accessories, fabric.	17	995	3,013,549	8,615,381	5,736,933	14,237,169
Awnings, tents and sails.....	139	1,722	3,661,311	7,256,353	6,533,155	13,998,095
Bags, cotton and jute.....	36	1,114	2,593,532	21,624,421	4,097,704	25,912,629
Cordage, rope and twine.....	17	1,191	3,735,936	8,089,835	7,269,748	15,571,556
Embroideries, pleating, hem- stitching, etc.....	168	1,879	4,005,650	3,100,200	6,410,287	9,561,215
Oilcloth, linoleum and other coated fabric.....	17	2,307	8,045,530	15,607,991	15,421,633	31,172,275
Miscellaneous textiles, <i>n.e.s.</i> ...	187	3,984	9,556,966	25,357,904	21,097,016	46,185,223
Knitting Mills.....	296	21,658	47,208,208	75,705,514	77,465,979	155,186,763
Hosiery.....	127	9,266	21,378,299	28,497,527	33,687,991	57,992,648
Knitted goods.....	169	12,392	25,829,909	52,207,987	43,777,988	97,194,115
Clothing.....	2,648	89,656	196,436,479	359,882,938	323,644,673	684,361,902
Men's, Women's and Children's Clothing—						
Clothing, children's, factory..	180	7,065	13,340,603	27,747,843	21,819,526	49,848,404
Clothing, men's, factory.....	570	31,445	68,809,295	137,857,666	113,367,324	250,462,315
Clothing, women's, factory.....	750	26,925	61,455,380	121,585,177	103,911,069	226,347,078
Clothing contractors, men's...	153	4,663	8,297,903	1,040,597	10,391,753	11,597,592
Clothing contractors, women's	116	2,539	4,070,792	247,383	5,459,682	5,777,900
Miscellaneous Clothing—						
Corsets.....	42	3,779	7,332,035	9,865,903	14,963,484	25,185,878
Fur dressing and dyeing.....	18	1,162	3,295,341	1,121,805	5,288,772	6,498,292
Fur goods.....	558	5,019	14,123,119	38,389,138	22,214,802	60,349,381
Gloves and mittens, fabric....	11	681	1,077,349	2,046,517	2,145,183	4,231,153
Hats and caps.....	165	4,561	10,536,317	11,659,269	16,778,289	28,695,413
Oiled and waterproofed cloth- ing.....	13	435	1,095,261	1,972,179	1,937,230	3,915,807
Clothing, <i>n.e.s.</i>	72	1,412	3,003,084	6,076,461	5,367,559	11,452,689
Wood Products.....	11,804	133,673	354,439,897	723,815,493	631,857,981	1,375,343,554
Furniture.....	1,822	30,623	84,242,386	125,400,624	132,521,922	261,551,101
Saw and Planing Mills—						
Flooring, hardwood.....	29	1,738	4,613,053	10,639,454	7,363,509	18,318,832
Sash, door and planing mills..	1,837	20,239	52,185,678	148,364,225	86,288,605	238,281,804
Sawmills.....	7,333	58,586	152,556,819	338,870,204	296,940,188	644,482,990
Veneers and plywoods.....	61	10,296	31,338,985	54,709,222	60,118,322	116,204,035
Other Wood Industries—						
Beekeepers' and poultrymen's supplies.....	7	64	117,143	199,496	200,223	395,496
Boxes and baskets, wood.....	168	3,695	8,479,591	12,249,849	13,569,579	26,317,798
Cooperage.....	76	626	1,568,343	3,261,008	2,094,861	5,477,484
Excelsior.....	13	139	294,418	222,153	428,843	693,896
Lasts, trees and shoe findings.	16	567	1,318,080	1,151,481	2,080,819	3,287,704
Morticians' goods.....	58	1,333	3,152,273	3,846,808	4,975,406	8,934,480
Woodenware.....	30	592	1,121,660	1,316,206	1,552,697	3,064,960
Wood turning.....	67	1,149	2,536,676	3,141,877	4,037,145	7,276,809
Miscellaneous wood products, <i>n.e.s.</i>	287	4,026	10,914,792	20,442,886	19,705,862	41,056,165
Paper Products.....	580	89,750	349,777,049	793,008,069	867,261,587	1,754,098,505
Boxes and bags, paper.....	208	14,613	43,990,063	129,064,316	83,249,425	213,459,941
Pulp and paper.....	125	62,205	265,298,119	546,079,192	689,818,173	1,326,938,138
Roofing paper.....	28	2,548	8,634,031	22,585,651	18,965,855	41,754,735
Miscellaneous paper goods.....	219	10,384	31,854,836	95,278,910	75,228,134	171,945,691
Printing, Publishing and Allied Trades.....	4,494	69,602	234,579,858	199,161,743	415,668,242	619,828,786
Commercial Printing—						
Printing and bookbinding.....	1,813	24,520	76,452,537	71,517,754	127,560,535	200,961,881
Trade composition.....	51	933	3,650,503	406,075	5,138,494	5,595,748
Engraving, Stereotyping and Allied Industries—						
Engraving, stereotyping and electrotyping.....	136	4,336	18,692,875	6,922,932	27,931,556	35,216,573
Lithographing.....	88	4,381	15,566,779	18,966,173	26,297,321	45,604,661

10.—Principal Statistics of Individual Manufacturing Industries 1955—continued

Group and Industry	Establishments	Employees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Printing, Publishing and Allied Trades—concluded						
Printing and Publishing—						
Printing and publishing.....	789	29,855	107,844,086	75,020,033	197,778,684	275,159,495
Publishing (only) of periodicals	1,617	5,577	12,373,078	26,328,776	30,961,652	57,290,428
Iron and Steel Products.....	2,895	181,700	667,657,079	1,005,246,993	1,199,245,953	2,242,717,918
Agricultural implements.....	77	11,753	41,929,040	59,283,305	54,464,347	113,923,309
Boilers, tanks and platework.....	101	8,378	31,218,918	41,388,589	51,813,520	93,486,695
Bridge building and structural steel.....	49	11,863	46,557,144	79,731,908	76,453,347	157,712,340
Castings, iron.....	201	15,266	55,273,998	84,452,041	97,595,101	182,906,534
Hardware, tools and cutlery.....	379	13,115	44,581,498	49,174,071	83,468,849	133,872,735
Heating and cooking apparatus.....	123	9,148	29,798,730	56,762,067	55,428,354	112,987,132
Machinery, household, office and store.....	77	8,333	28,009,461	46,709,159	58,046,043	106,261,768
Machinery, industrial.....	321	23,838	86,529,705	102,665,897	146,908,572	252,944,378
Machine shops.....	674	6,814	21,390,958	15,830,901	31,721,004	48,498,932
Machine tools.....	10	1,137	4,691,926	3,600,490	5,666,329	9,218,288
Primary iron and steel.....	50	32,507	136,879,403	212,288,266	291,793,126	526,318,453
Sheet metal products.....	361	19,080	66,662,817	138,211,294	121,016,972	260,167,480
Wire and wire goods.....	125	9,261	34,301,474	68,537,562	59,514,629	130,457,880
Miscellaneous iron and steel products.....	347	11,207	39,832,007	46,611,443	65,355,760	114,261,994
Transportation Equipment.....	594	131,789	490,434,996	1,117,768,836	809,748,007	1,950,410,035
Aircraft and parts.....	52	33,036	130,269,009	140,831,164	208,800,111	354,314,837
Bicycles and parts.....	6	640	2,141,014	1,529,113	4,146,004	5,875,752
Boat building.....	204	1,666	4,177,319	4,397,785	5,544,205	10,267,548
Carriages, wagons and sleighs ¹	27	793	2,170,376	4,015,082	3,672,985	7,894,091
Motor vehicles.....	15	33,429	134,661,758	631,181,084	269,601,907	907,410,923
Motor vehicle parts.....	188	19,996	74,581,239	149,004,157	130,778,716	285,070,612
Railway rolling-stock.....	32	25,400	86,257,623	139,475,062	102,324,180	245,739,330
Shipbuilding.....	70	16,829	56,167,658	47,335,389	84,879,899	133,836,942
Non-ferrous Metal Products....	581	53,311	201,109,879	974,792,188	590,744,048	1,626,980,855
Aluminum products.....	93	6,832	24,025,405	45,961,129	31,733,656	79,839,602
Brass and copper products.....	157	8,864	32,274,041	150,395,034	64,086,451	216,500,000
Jewellery and silverware.....	221	5,178	13,680,463	25,711,100	22,245,768	48,016,269
Non-ferrous metal smelting and refining.....	24	28,606	118,189,378	710,762,890	443,805,081	1,211,716,481
White metal alloys.....	60	3,102	10,496,152	38,099,192	24,384,056	62,505,196
Miscellaneous non-ferrous metal products.....	26	729	2,444,440	3,862,843	4,489,036	8,403,307
Electrical Apparatus and Supplies.....	468	76,244	264,031,474	477,655,753	469,918,651	962,615,012
Batteries.....	36	2,237	7,872,246	23,718,135	15,722,359	40,055,423
Telecommunication equipment.....	126	19,036	61,741,290	155,719,565	112,579,145	263,420,279
Refrigerators, vacuum cleaners and appliances.....	79	9,463	30,387,878	64,513,978	61,797,166	135,669,776
Machinery, heavy electrical.....	70	22,216	81,904,903	75,020,917	120,703,089	198,408,390
Miscellaneous electrical apparatus and supplies.....	157	23,292	82,125,157	158,683,158	159,116,892	325,061,144
Non-metallic Mineral Products. 1,171	38,949	131,006,731	174,489,301	301,656,877	514,118,801	
Abrasives, artificial.....	17	2,695	10,567,048	15,293,264	21,933,836	42,519,695
Asbestos products.....	16	2,075	7,222,575	12,889,656	16,393,874	30,127,022
Cement, hydraulic.....	12	2,822	11,100,205	11,505,305	44,336,891	68,812,666
Clay products from domestic clay.....	118	4,270	13,566,021	886,736	30,178,957	35,259,770
Clay products from imported clay.....	37	2,105	6,813,657	4,911,302	12,634,247	18,394,390
Concrete products.....	592	9,780	30,730,408	63,323,732	68,502,883	133,826,687
Glass and glass products.....	108	7,870	26,291,404	31,000,677	45,139,201	80,830,622
Gypsum products.....	12	1,977	6,830,904	13,893,069	16,388,745	31,469,039

¹ Includes miscellaneous transportation equipment items.

10.—Principal Statistics of Individual Manufacturing Industries 1955—concluded

Group and Industry	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Non-metallic Mineral Products —concluded						
Lime.....	39	1,118	3,849,141	1,308,751	11,793,430	16,576,891
Salt.....	13	809	2,839,440	2,280,268	8,569,792	11,869,077
Sand-lime brick.....	4	162	571,315	443,848	1,057,528	1,630,677
Stone products.....	153	2,316	7,445,642	8,610,581	15,684,506	24,985,809
Miscellaneous non-metallic mineral products.....	50	950	3,178,971	8,142,112	9,042,987	17,816,456
Products of Petroleum and Coal.....	106	17,486	72,436,559	704,384,995	417,349,989	1,160,824,499
Coke and gas products.....	25	3,736	13,181,383	57,844,131	39,841,008	103,891,182
Petroleum products.....	61	13,340	57,892,387	642,872,134	373,368,531	1,048,834,455
Miscellaneous products of petroleum and coal.....	20	410	1,362,789	3,668,730	4,140,450	8,098,862
Chemicals and Allied Products.....	1,126	51,856	185,267,943	480,104,190	528,928,509	1,044,079,000
Acids, alkalies and salts.....	45	8,597	35,547,851	61,686,514	95,023,999	172,255,750
Fertilizers.....	39	2,935	11,542,380	41,396,928	45,895,045	92,498,839
Medicinal and pharmaceutical preparations.....	210	7,629	23,937,050	33,819,677	72,703,379	108,121,734
Paints, varnishes and lacquers.....	122	5,994	20,768,461	59,785,089	58,245,997	117,184,189
Primary plastics.....	23	3,036	12,332,507	40,264,982	33,760,502	75,052,166
Soaps, washing compounds and cleaning preparations.....	141	3,827	14,047,369	44,918,815	54,284,965	100,105,140
Toilet preparations.....	98	2,166	5,890,056	13,842,997	23,029,087	36,849,128
Vegetable oils.....	12	682	2,508,689	42,018,137	7,017,207	50,322,215
Other Chemical Industries—						
Adhesives.....	29	576	1,934,597	5,030,858	5,368,263	10,908,938
Coal tar distillation.....	11	528	2,080,557	7,010,908	4,802,463	11,892,812
Gases, compressed.....	52	1,387	4,759,759	2,942,918	12,985,965	16,501,924
Inks.....	35	996	3,416,557	5,903,527	8,739,452	14,748,162
Polishes and dressings.....	48	805	2,563,953	8,746,585	10,412,904	19,605,544
Miscellaneous chemical products, <i>n.e.s.</i>	261	12,698	43,943,157	112,736,255	96,659,281	218,032,459
Miscellaneous Industries.....	1,524	31,511	89,239,630	114,448,353	164,876,649	283,147,866
Brooms, brushes and mops.....	101	2,113	5,103,727	7,823,119	9,150,960	17,299,701
Clocks, watches and watch cases.....	35	1,107	3,501,645	7,027,734	6,945,639	14,299,124
Fountain pens and pencils.....	17	1,040	2,713,923	5,164,258	6,053,119	11,458,847
Musical instruments.....	28	1,213	3,491,161	3,134,123	6,876,363	10,182,867
Plastics products.....	170	4,379	11,333,120	24,247,328	24,459,307	48,732,590
Scientific and professional equipment.....	151	6,514	22,957,061	22,780,219	40,149,398	63,223,468
Sporting goods.....	92	1,828	4,500,836	4,975,649	7,841,030	13,032,152
Toys and games.....	56	1,405	3,320,076	6,231,378	5,762,524	12,311,395
Typewriter supplies.....	10	395	1,216,459	2,510,102	2,582,566	5,120,176
Other Miscellaneous Industries—						
Artificial flowers and feathers.....	44	468	904,149	993,903	1,508,317	2,530,755
Buttons, buckles and fasteners.....	45	1,569	4,102,266	5,096,486	6,583,795	12,096,620
Candles.....	15	224	566,958	1,137,845	1,470,731	2,625,924
Hair goods.....	13	102	297,776	873,382	513,909	1,384,282
Ice, artificial.....	66	550	1,525,372	183,129	3,194,479	3,908,327
Lamps, electric and lamp shades.....	65	1,283	2,789,422	4,817,295	4,980,403	9,850,158
Models and patterns, excluding paper.....	70	387	1,473,898	475,261	2,322,837	2,842,375
Pipes, lighters and smokers' supplies.....	13	175	472,493	1,165,152	1,214,611	2,443,097
Signs, electric, neon and other.....	305	3,102	9,777,004	7,819,492	16,930,088	25,278,087
Stamps and stencils, rubber and metal.....	65	897	2,605,349	1,596,363	4,008,974	5,642,901
Statuary, art goods, regalia and novelties.....	117	882	1,982,841	1,633,705	2,988,597	4,712,793
Umbrellas.....	8	167	347,779	713,814	625,735	1,314,797
Miscellaneous industries.....	38	1,711	4,256,315	4,039,616	8,713,267	12,857,430
Totals, All Industries.....	38,182	1,298,461	4,142,499,534	10,338,202,165	8,753,450,496	19,513,933,811

11.—Quantity and Value of the Principal Commodities Produced or Shipped by the Manufacturing Industries 1954 and 1955

NOTE.—All values in this table are for factory shipments except for those items marked with an asterisk which are for gross value of products.

Group and Commodity	Unit of Measure	1954		1955	
		Quantity	Value	Quantity	Value
			\$		\$
Foods—					
Biscuits, all kinds.....	lb.	236,902,540	66,070,322	237,594,676	66,593,369
Bread.....	"	1,525,974,000	173,166,427	1,530,048,000	175,096,743
Butter, factory made.....	"	316,781,734	184,742,536	320,266,563	186,497,693
Cheese, factory made.....	"	153,142,290	49,793,305	147,344,348	47,283,926
Confectionery, all kinds.....	...	—	75,363,925	—	74,110,101
Cream, sold in dairy factories.....	lb. b. fat	26,907,155	29,516,389	28,335,016	31,302,794
Feed, chopped, grain.....	ton	532,577	30,703,705	549,829	30,678,969
Feeds, stock and poultry, prepared.....	"	2,088,290	170,969,205	2,136,161	168,995,517
Fish, canned and otherwise prepared*.....	lb.	271,473,296	71,178,800	225,731,848	62,701,400
Flour, wheat.....	bbl.	20,837,671	177,870,676	20,267,761	166,010,092
Fruits and vegetables, canned.....	lb.	582,112,121	75,059,995	629,568,193	79,247,333
Fruits and vegetables, frozen*.....	...	—	9,349,267	—	10,730,463
Ice cream, factory made.....	gal.	27,976,186	46,598,754	31,311,644	50,981,337
Jams, jellies and marmalades*.....	lb.	—	20,067,696	108,925,606	19,343,220
Lard.....	"	93,927,740	17,181,197	105,514,021	14,659,175
Meats, canned, including poultry, pastes, etc.....	"	68,029,709	33,720,611	86,517,771	38,831,870
Meats, cooked, including sausage, weiners, etc.....	"	239,671,107	95,414,327	259,636,263	96,166,752
Meats, cured and smoked.....	"	226,878,266	123,748,512	251,669,910	119,790,229
Meats, sold fresh and frozen, including poultry.....	"	1,439,405,208	474,308,910	1,392,369,010	452,775,374
Milk, sold in dairy factories.....	gal.	175,297,372	122,900,489	177,370,835	128,004,175
Milk, evaporated and condensed.....	lb.	297,805,823	35,627,414	310,985,600	36,797,953
Pickles, relishes and catsup.....	...	—	18,279,860	—	19,698,062
Pies, cakes and pastry.....	...	—	72,127,030	—	77,397,196
Powders, edible (custard, jelly, milk, etc.).....	...	—	33,739,763	—	36,978,275
Shortening.....	lb.	157,106,453	37,307,514	153,902,880	35,031,438
Soups, canned (except infants).....	"	212,397,846	34,104,633	224,000,394	36,082,930
Sugar, granulated (cane and beet).....	"	1,248,624,972	96,047,544	1,293,932,061	98,644,306
Tea and coffee, roasted, blended and packed.....	"	115,589,949	124,267,838	117,006,439	119,948,089
Beverages—					
Aerated waters*.....	gal.	105,930,881	92,770,753	118,441,866	103,651,706
Beer, ale, stout and porter (sales).....	"	200,459,309	317,725,745	211,101,903	331,117,100
Beverage spirits, sold (net sales).....	pr. gal.	11,946,178	91,407,737	11,847,649	91,211,509
Wine, sold.....	Imp. gal.	4,546,411	11,635,797	4,687,848	12,012,356
Tobacco and Tobacco Products—					
Cigarettes.....	'000	22,425,791	303,682,204	24,864,332	332,011,517
Cigars.....	"	240,520	17,925,856	257,233	19,360,206
Tobacco, chewing, smoking and snuff*.....	lb.	27,284,959	68,074,687	23,455,973	58,414,898
Tobacco, raw leaf, processed*.....	"	122,254,714	73,307,323	151,363,083	88,551,067
Textile Products (except Clothing)—					
Bags, cotton and jute.....	No.	118,494,903	23,463,072	118,399,411	22,465,462
Blankets.....	...	—	13,222,927	—	13,698,117
Carpets, mats and rugs.....	...	—	13,376,425	—	15,125,899
Cotton fabrics.....	...	—	104,812,860	—	125,466,179
Synthetic woven fabrics, all types.....	yd.	83,002,938	57,816,485	97,286,197	64,267,338
Tire fabrics*.....	lb.	26,981,597	22,274,686	32,403,849	26,374,151
Twine and cordage.....	...	—	12,650,223	—	13,931,856
Woven fabrics, wool or containing wool.....	sq. yd.	22,438,542	39,436,580	33,085,201	49,199,619
Yarns, cotton, rayon, wool, etc. (for sale)*.....	...	—	112,640,049	—	136,318,344
Clothing—					
Coats and overcoats, cloth, men's and youths'.....	No.	604,036	18,501,714	724,471	20,665,296
Coats, wool, women's and misses'.....	"	1,582,413	36,281,941	1,473,330	34,086,240

¹ Includes excise taxes on prime cost of spirits and tobacco products.

11.—Quantity and Value of the Principal Commodities Produced or Shipped by the Manufacturing Industries 1954 and 1955—continued

Group and Commodity	Unit of Measure	1954		1955	
		Quantity	Value	Quantity	Value
			\$		\$
Clothing—concluded					
Coats, fur, women's (factory made).....	No.	214,369	46,925,678	211,073	48,918,139
Coats, short (incl. windbreakers, mackinaws, parkas, leather coats, etc.).....	doz.	351,568	26,043,746	379,949	28,082,631
Dresses, women's and misses'.....	No.	12,725,049	73,781,295	12,687,705	76,714,513
Footwear, leather.....	pr.	32,147,026	115,004,524	32,353,422	116,397,192
Footwear, rubber*.....	"	11,807,103	29,458,364	13,005,906	33,162,482
Gloves and mittens, all kinds.....	doz. pr.	1,839,334	13,565,792	1,896,440	14,778,033
Hats and caps, men's.....	doz.	691,894	10,574,597	410,219	8,413,819
Hats, women's and children's.....	"	472,747	13,056,018	463,840	13,879,566
Hosiery, all kinds.....	doz. pr.	10,231,726	60,022,783	9,223,527	58,185,954
Shirts, fine, work and sport.....	doz.	2,425,016	51,814,735	2,468,825	54,131,733
Sport suits, slacks and other sport clothing, <i>n.e.s.</i>.....	...	—	14,672,657	—	16,582,557
Suits, men's and youths', fine, woollen.....	No.	1,265,001	49,395,783	1,256,787	48,443,432
Underwear.....	...	—	32,313,346	—	53,662,247
Wood Products—					
Boxes, wooden.....	...	—	12,157,664	—	13,462,095
Lumber, planed.....	M ft. b.m.	3,850,196	282,993,372	4,385,660	335,571,063
Lumber, sawn.....	"	4,789,233	303,177,741	5,152,228	330,246,866
Pulp, wood, made for sale.....	short ton	1,859,483	222,559,258	2,013,303	244,017,750
Sash, doors and other mill work.....	.....	—	66,807,575	—	75,510,392
Paper Products—					
Bags, paper.....	...	—	45,273,773	—	48,588,432
Boxes, paper.....	...	—	147,624,495	—	161,008,241
Paper, book and writing.....	ton	269,353	68,613,807	301,352	74,904,349
Paper, newsprint.....	"	6,000,895	657,487,344	6,196,319	688,338,369
Paper, wrapping.....	"	250,408	51,341,374	263,915	53,998,859
Paper boards, all types.....	"	940,196	117,172,691	1,027,441	130,365,751
Printing, Publishing and Allied Trades—					
Books and catalogues, printed and bound.....	...	—	34,734,920	—	35,597,524
Other advertising matter, printed.....	...	—	45,796,251	—	51,249,039
Periodicals printed for publishers.....	...	—	21,544,914	—	23,532,252
Periodicals printed by publishers—					
Subscriptions and sales.....	...	—	59,954,686	—	62,224,254
Gross revenue from advertising.....	...	—	160,549,493	—	174,704,296
Sheet forms, commercial, legal, etc., printed.....	...	—	43,742,586	—	50,150,941
Iron and Steel Products—					
Bars, iron and steel, hot-rolled (sold).....	ton	445,519	56,525,130	621,819	79,841,771
Boilers, heating and power.....	...	—	16,349,051	—	18,077,991
Castings, grey iron (made for sale).....	...	—	33,439,275	—	38,732,201
Farm implements and parts.....	...	—	113,089,000	—	109,701,000
Forgings, steel and other.....	...	—	25,307,936	—	28,891,941
Hardware, builders' and other.....	...	—	39,356,000	—	41,109,000
Machinery, industrial, household, office and store and parts.....	...	—	503,853,188	—	549,505,000
Pig iron (sold).....	ton	455,552	22,142,040	609,978	30,539,000
Pipes, tubing and fittings, iron and steel.....	...	—	85,551,000	—	121,795,000
Rolled iron and steel forms, semi-finished (sold).....	net ton	150,917	12,748,936	298,646	23,114,634
Sheets, bars and other cold-rolled products (sold).....	"	557,083	95,146,949	801,831	131,932,043
Steel ingots and castings (sold).....	"	86,066	35,434,713	201,114	43,682,247
Steel shapes erected, buildings, bridges, etc.*.....	"	342,657	106,206,032	360,741	109,992,543
Steel shapes, structural, made in primary mills.....	"	180,144	18,954,742	240,105	25,650,273
Stoves, coal, wood, electric and gas.....	...	—	42,549,729	—	49,649,424
Tools and implements, hand, all kinds and parts.....	...	—	29,676,000	—	30,817,000
Wire, wire rope and cable, steel.....	...	—	36,842,971	—	44,837,421

11.—Quantity and Value of the Principal Commodities Produced or Shipped by the Manufacturing Industries 1954 and 1955—concluded

Group and Commodity	Unit of Measure	1954		1955	
		Quantity	Value	Quantity	Value
			\$		\$
Transportation Equipment—					
Aircraft, completed in year.....	...	—	186,934,184	—	108,408,292
Automobiles, commercial.....	No.	69,454	117,613,726	78,012	136,327,462
Automobiles, passenger.....	"	287,191	436,820,430	375,028	610,683,424
Automobile parts and accessories, including tires.....	...	—	406,315,000	—	523,162,000
Buses.....	No.	438	4,678,083	557	7,128,252
Cars, railway, complete, freight and passenger.....	"	8,287	88,394,712	3,736	27,821,586
Locomotives, diesel-electric, new	"	244	41,105,438	362	59,692,536
Ship and ship repairs*.....	...	—	180,286,323	—	153,474,873
Non-ferrous Metal Products—					
Jewellery.....	...	—	18,195,747	—	19,466,000
Kitchenware, aluminum.....	...	—	8,071,507	—	6,831,000
Silverware.....	...	—	10,548,924	—	10,559,863
Smelter and refinery products*..	...	—	922,578,998	—	1,211,716,481
Electrical Apparatus and Supplies—					
Batteries, electric, storage.....	...	—	21,366,340	—	25,173,394
Radio receiving sets, complete...	No.	487,620	16,509,275	621,957	19,176,618
Refrigerators, household, mechanical.....	"	229,945	44,033,304	271,532	49,548,437
Television sets.....	"	611,206	105,682,414	806,253	130,497,108
Wires and cables, electric.....	...	—	122,928,760	—	150,732,153
Non-metallic Mineral Products—					
Abrasives, artificial.....	ton	250,178	25,828,451	252,109	26,358,212
Coke, gas-house*.....	"	3,424,218	50,537,888	4,004,624	58,241,355
Concrete, ready-mixed.....	...	—	42,753,235	—	58,918,365
Gas, manufactured and natural, sold*.....	'000 cu. ft.	113,781,486	60,259,359	136,737,898	75,440,255
Glass, pressed and blown (bottles, sealers, ovenware, etc.).....	...	—	41,739,445	—	44,868,777
Chemicals and Allied Products—					
Calcium and sodium compounds..	...	—	41,812,572	—	48,103,419
Enamels, lacquers and varnishes..	...	—	44,496,262	—	52,056,196
Fertilizers, mixed.....	ton	668,200	32,120,000	685,700	33,112,000
Medicinal and pharmaceutical preparations.....	...	—	90,799,000	—	100,878,000
Paints, mixed, ready for use.....	Imp. gal.	10,889,581	40,328,532	11,664,161	42,209,118
Synthetic resins.....	...	—	36,647,000	—	49,430,000
Soaps and synthetic detergents...	lb.	287,030,000	68,312,000	294,896,000	70,633,000
Toilet preparations.....	...	—	41,105,000	—	47,167,000
Miscellaneous—					
Bags, hand and hand luggage....	...	—	14,238,215	—	14,962,900
Brooms and household brushes...	doz.	904,688	5,005,317	891,118	5,091,675
Cans, metal, for food.....	...	—	54,933,274	—	63,013,733
Furniture, wood and metal, including beds and couches.....	...	—	185,821,745	—	193,236,408
Gasoline*.....	Imp. gal.	2,438,654,370	446,868,591	2,761,317,730	506,621,628
Leather, shoe.....	...	—	31,403,987	—	34,546,034
Mattresses.....	...	—	18,410,784	—	20,031,757
Mops, floor.....	...	—	2,286,622	—	2,809,962
Oil, fuel.....	Imp. gal.	2,715,235,836	329,813,361	3,215,904,890	396,443,216
Pianos, organs and parts.....	...	—	4,339,457	—	4,709,467
Scientific and professional equipment.....	...	—	51,727,273	—	49,012,845
Sporting goods.....	...	—	12,753,554	—	14,852,798
Springs, bed and other furniture.	...	—	10,116,441	—	11,927,423
Toys and games.....	...	—	17,965,116	—	20,168,422

Subsection 2.—Manufactures classified by Origin of Materials

The distinction made between farm materials of Canadian and foreign origin is based on whether the materials are indigenous to Canada rather than on their actual source. Thus, the industries included in the foreign origin classes are those depending upon materials that cannot be grown in Canada, such as tea, coffee, spices, cane sugar, rice, rubber, cotton, etc. Industries included in the Canadian origin classes may, however, be using large quantities of imported materials.

The mineral origin group includes, in addition to non-ferrous metals so largely produced in Canada, the manufactures of iron and steel, of petroleum, and of other mineral substances, the raw materials for which are very largely imported. Products of mineral origin, with the exception of fuels, are nearly all durable goods.

12.—Principal Statistics of Manufacturing Industries classified according to Origin of Materials Used, by Main Group 1954 and 1955

Year and Origin of Material Used	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
1954						
Farm origin.....	9,542	301,661	791,390,838	3,010,857,496	1,735,120,378	4,812,467,809
Mineral origin.....	6,854	539,830	1,902,255,686	4,083,393,939	3,808,242,171	8,113,391,979
Forest origin.....	16,823	280,573	857,047,039	1,547,843,710	1,727,150,805	3,380,340,406
Marine origin.....	586	14,202	26,001,277	95,632,683	55,219,381	153,456,535
Wildlife origin.....	598	6,431	17,348,494	37,022,130	26,595,921	64,099,781
Mixed origin.....	3,625	125,269	302,644,357	467,107,596	549,795,481	1,030,770,994
Grand Totals.....	38,028	1,267,966	3,896,687,691	9,241,857,554	7,902,124,137	17,554,527,504
Farm Origin Group—						
From field crops.....	6,135	173,171	468,666,325	1,631,251,171	1,170,756,138	2,845,128,473
From animal husbandry....	3,407	128,490	322,724,513	1,379,606,325	564,364,240	1,967,339,336
Totals, Farm Origin.....	9,542	301,661	791,390,838	3,010,857,496	1,735,120,378	4,812,467,809
Canadian origin.....	8,612	242,239	624,181,936	2,617,517,447	1,377,694,249	4,041,115,667
Foreign origin.....	930	59,422	167,208,902	393,340,049	357,426,129	771,352,142
1955						
Farm origin.....	9,563	306,775	834,466,376	3,090,034,728	1,886,361,992	5,018,043,074
Mineral origin.....	6,991	553,298	2,025,503,097	4,879,820,983	4,292,170,913	9,420,260,258
Forest origin.....	16,742	288,689	920,103,929	1,709,062,373	1,886,856,254	3,714,054,272
Marine origin.....	574	14,626	26,320,382	101,921,132	55,304,122	159,888,395
Wildlife origin.....	576	6,181	17,418,460	39,510,943	27,503,574	66,847,673
Mixed origin.....	3,736	128,892	318,597,290	517,852,006	605,253,641	1,134,840,139
Grand Totals.....	38,182	1,298,461	4,142,409,534	10,338,202,165	8,753,450,496	19,513,933,811
Farm Origin Group—						
From field crops.....	6,250	177,315	498,522,163	1,721,204,098	1,278,200,614	3,020,832,929
From animal husbandry....	3,313	129,460	335,944,213	1,368,830,630	608,161,378	1,997,210,145
Totals, Farm Origin.....	9,563	306,775	834,466,376	3,090,034,728	1,886,361,992	5,018,043,074
Canadian origin.....	8,615	244,696	653,033,200	2,622,997,209	1,477,350,908	4,138,441,425
Foreign origin.....	948	62,079	181,433,176	467,037,519	409,011,084	879,601,649

Subsection 3.—Manufactures classified by Type of Ownership

The figures showing the classification of the type of ownership under which Canadian manufacturers operate are available from 1946, although the first survey did not include the fish curing and packing industry. Its inclusion in subsequent years has not materially altered the percentage distribution of individual ownership, incorporated companies, etc.

As is to be expected, the smaller establishments, regardless of the type of products manufactured, are carried on under individual ownership. In that category industries conducted on a small scale contain a large number of establishments, the percentage decreasing as the scale of operations increases, as the following figures for 1955 show:—

<i>Group</i>	<i>Average Number of Employees per Establishment</i>	<i>Percentage of Individual Ownership Establishments to the Total</i>
Wood products.....	11.3	60.1
Printing, publishing and allied trades.....	15.5	43.6
Miscellaneous manufacturing industries.....	20.7	35.6
Foods and beverages.....	22.1	46.4
Non-metallic mineral products.....	33.3	32.2
Clothing.....	33.9	27.1
Chemicals and allied products.....	46.1	16.7
Leather products.....	47.3	26.6
Iron and steel products.....	62.8	24.8
Textiles.....	70.8	30.0
Knitting mills.....	73.2	15.2
Non-ferrous metal products.....	91.8	24.8
Paper products.....	154.7	7.9
Electrical apparatus and supplies.....	162.9	7.7
Products of petroleum and coal.....	164.9	1.9
Tobacco and tobacco products.....	170.2	35.7
Transportation equipment.....	221.9	27.9
Rubber products.....	267.2	14.6
ALL GROUPS.....	34.0	42.7

Of the 38,182 establishments operating in 1955, 1,617 establishments in the periodicals publishing industry were unclassifiable, leaving 36,565 establishments in the four categories of ownership. Individual ownership numbered 15,609 establishments, partnerships 4,977, incorporated companies 15,037 and co-operatives 942. The percentage distribution of the four categories of ownership is given in Table 13 for 1946-55.

13.—Percentage Distribution of Establishments in Manufacturing Industries classified by Type of Ownership, by Province and Industrial Group 1954 and 1955 with Totals for 1946-55.

Year, Province and Industrial Group	Individual Ownership	Partner- ships	Incor- porated Companies	Co-opera- tives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1946 (estimated).....	47.3	16.0	33.4	3.3	100.0
1947.....	46.4	16.1	34.3	3.2	100.0
1948.....	46.2	16.4	34.4	3.0	100.0
1949.....	46.0	15.8	35.3	2.9	100.0
1950.....	45.6	15.0	36.3	3.1	100.0
1951.....	44.6	15.5	36.9	3.0	100.0
1952.....	44.9	15.4	36.9	2.8	100.0
1953.....	44.4	14.8	38.2	2.6	100.0
1954					
Newfoundland.....	50.7	31.8	17.4	0.1	100.0
Prince Edward Island.....	47.1	19.4	27.2	6.3	100.0
Nova Scotia.....	53.9	14.9	29.4	1.8	100.0
New Brunswick.....	53.8	12.3	31.2	2.7	100.0
Quebec.....	48.3	10.8	37.0	3.9	100.0
Ontario.....	37.5	14.3	46.4	1.8	100.0
Manitoba.....	39.7	15.3	43.4	1.6	100.0
Saskatchewan.....	54.7	17.5	23.1	4.7	100.0
Alberta.....	49.3	16.2	31.4	3.1	100.0
British Columbia.....	37.8	18.8	42.1	1.3	100.0
Yukon and Northwest Territories.....	45.2	19.4	35.4	—	100.0
Canada, 1954.....	43.6	14.3	39.5	2.6	100.0

13.—Percentage Distribution of Establishments in Manufacturing Industries classified by Type of Ownership, by Province and Industrial Group 1954 and 1955 with Totals for 1946-55—concluded.

Year, Province and Industrial Group	Individual Ownership	Partner- ships	Incor- porated Companies	Co-opera- tives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1954—concluded					
Foods and beverages.....	47.1	10.6	31.3	11.0	100.0
Tobacco and tobacco products.....	35.8	3.8	54.7	5.7	100.0
Rubber products.....	9.6	4.1	86.3	—	100.0
Leather products.....	27.8	12.0	60.2	—	100.0
Textiles.....	29.6	10.8	59.2	0.4	100.0
Knitting mills.....	14.1	12.5	73.4	—	100.0
Clothing.....	27.4	18.8	53.8	—	100.0
Wood products.....	61.5	18.7	19.6	0.2	100.0
Paper products.....	8.2	3.3	88.5	—	100.0
Printing, publishing and allied trades ¹	44.1	15.3	40.1	0.5	100.0
Iron and steel products.....	24.7	12.7	62.5	0.1	100.0
Transportation equipment.....	28.9	10.0	61.1	—	100.0
Non-ferrous metal products.....	25.0	12.0	63.0	—	100.0
Electrical apparatus and supplies.....	8.8	4.8	86.4	—	100.0
Non-metallic mineral products.....	32.7	14.4	52.9	—	100.0
Products of petroleum and coal.....	1.7	0.9	95.7	1.7	100.0
Chemicals and allied products.....	16.8	5.4	77.5	0.3	100.0
Miscellaneous manufacturing industries.....	33.9	12.3	53.6	0.2	100.0
1955					
Newfoundland.....	47.5	32.8	19.5	0.2	100.0
Prince Edward Island.....	47.3	17.4	30.3	5.0	100.0
Nova Scotia.....	52.9	14.8	30.5	1.8	100.0
New Brunswick.....	53.9	10.9	32.5	2.7	100.0
Quebec.....	47.4	10.5	38.2	3.9	100.0
Ontario.....	36.9	13.3	47.8	2.0	100.0
Manitoba.....	38.9	14.9	44.6	1.6	100.0
Saskatchewan.....	53.1	16.2	25.7	5.0	100.0
Alberta.....	47.6	16.9	32.4	3.1	100.0
British Columbia.....	36.3	17.0	45.5	1.2	100.0
Yukon and Northwest Territories.....	30.8	19.2	50.0	—	100.0
Canada, 1955.....	42.7	13.6	41.1	2.6	100.0
Foods and beverages.....	46.4	10.6	32.1	10.9	100.0
Tobacco and tobacco products.....	35.7	1.8	58.9	3.6	100.0
Rubber products.....	14.6	3.7	81.7	—	100.0
Leather products.....	26.6	11.2	62.2	—	100.0
Textiles.....	30.0	11.2	58.5	0.3	100.0
Knitting mills.....	15.2	10.8	74.0	—	100.0
Clothing.....	27.1	17.0	55.9	—	100.0
Wood products.....	60.1	18.1	21.6	0.2	100.0
Paper products.....	7.9	3.6	88.5	—	100.0
Printing, publishing and allied trades ¹	43.6	15.1	40.8	0.5	100.0
Iron and steel products.....	24.8	11.6	63.5	0.1	100.0
Transportation equipment.....	27.9	10.1	62.0	—	100.0
Non-ferrous metal products.....	24.8	11.0	64.2	—	100.0
Electrical apparatus and supplies.....	7.7	3.4	88.9	—	100.0
Non-metallic mineral products.....	32.2	13.2	54.5	0.1	100.0
Products of petroleum and coal.....	1.9	—	96.2	1.9	100.0
Chemicals and allied products.....	16.7	4.4	78.6	0.3	100.0
Miscellaneous manufacturing industries.....	35.6	12.2	52.0	0.2	100.0

¹ Four main categories of ownership only; the non-classifiable group is not included.

The establishments operating under individual ownership are not as important from the point of view of employment provided as their large numbers would indicate. According to Tables 14 and 15, these establishments, which comprise 43 p.c. of the total, had only 5 p.c. of the total employees. Partnerships accounted for 14 p.c. of the number of establishments and 3 p.c. of the total employees. Incorporated companies with 41 p.c. of the number of establishments had 91 p.c. of the employees. Co-operatives with 3 p.c. of the number had only 1 p.c. of the employees.

On the basis of employment provided, incorporated companies are, by a wide margin, the most important factor in the employment field. In the petroleum and coal products group practically 100 p.c. of the employees were reported by such companies. Incorporated companies in the electrical apparatus and supplies, rubber, paper, and transportation equipment groups had 99 p.c. of the employees; chemicals, tobacco and non-ferrous metal products groups had 98 p.c.; iron and steel products 96 p.c.; textiles 95 p.c.; knitting mills 94 p.c.; non-metallic mineral products 93 p.c.; leather products 90 p.c.; miscellaneous industries 88 p.c.; printing, publishing and allied trades 86 p.c.; clothing 83 p.c.; and foods and beverages 82 p.c. Companies in the wood products group, with 73 p.c., reported the lowest proportion of total employment.

14.—Percentage Distribution of Employment in the Manufacturing Industries classified by Type of Ownership, by Province and Industrial Group 1954 and 1955 with Totals for 1946-55.

Year, Province and Industrial Group	Individual Ownership	Partner- ships	Incor- porated Companies	Co-opera- tives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1946 (estimated).....	7.9	4.7	86.5	0.9	100.0
1947.....	7.5	4.5	87.0	1.0	100.0
1948.....	7.1	4.4	87.5	1.0	100.0
1949.....	6.8	4.2	88.0	1.0	100.0
1950.....	6.3	3.9	88.8	1.0	100.0
1951.....	6.1	3.7	89.3	0.9	100.0
1952.....	5.9	3.6	89.6	0.9	100.0
1953.....	5.7	3.3	90.2	0.8	100.0
1954					
Newfoundland.....	7.8	6.5	85.7	—	100.0
Prince Edward Island.....	18.9	11.3	64.6	5.2	100.0
Nova Scotia.....	9.9	3.7	85.5	0.9	100.0
New Brunswick.....	9.4	3.6	85.3	1.7	100.0
Quebec.....	6.7	3.3	89.2	0.8	100.0
Ontario.....	3.6	2.6	93.5	0.3	100.0
Manitoba.....	5.6	3.8	89.7	0.9	100.0
Saskatchewan.....	12.1	6.3	70.6	11.0	100.0
Alberta.....	9.9	6.6	81.2	2.3	100.0
British Columbia.....	5.7	4.6	87.7	2.0	100.0
Yukon and Northwest Territories.....	21.4	12.7	65.9	—	100.0
Canada, 1954.....	5.4	3.3	90.5	0.8	100.0
Foods and beverages.....	9.7	3.7	82.0	4.6	100.0
Tobacco and tobacco products.....	1.3	—	96.1	2.6	100.0
Rubber products.....	0.2	0.5	99.3	—	100.0
Leather products.....	5.9	5.0	89.1	—	100.0
Textiles.....	2.9	1.9	95.1	0.1	100.0
Knitting mills.....	1.6	5.0	93.4	—	100.0
Clothing.....	8.7	9.3	82.0	—	100.0
Wood products.....	18.5	9.2	72.0	0.3	100.0
Paper products.....	0.4	0.3	99.3	—	100.0
Printing, publishing and allied industries ¹	8.1	4.5	86.2	1.2	100.0
Iron and steel products.....	2.2	1.7	95.9	0.2	100.0
Transportation equipment.....	0.5	0.3	99.2	—	100.0
Non-ferrous metal products.....	1.5	1.0	97.5	—	100.0
Electrical apparatus and supplies.....	0.2	0.3	99.5	—	100.0
Non-metallic mineral products.....	5.1	3.4	91.5	—	100.0
Products of petroleum and coal.....	—	—	100.0	—	100.0
Chemicals and allied products.....	1.1	0.9	97.7	0.3	100.0
Miscellaneous manufacturing industries.....	7.1	4.0	88.7	0.2	100.0

¹ Four main categories of ownership only; the non-classifiable group is not included.

14.—Percentage Distribution of Employment in the Manufacturing Industries classified by Type of Ownership, by Province and Industrial Group 1954 and 1955 with Totals for 1946-55—concluded.

Year, Province and Industrial Group	Individual Ownership	Partnerships	Incorporated Companies	Co-operatives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1955					
Newfoundland.....	6.6	6.1	87.1	0.2	100.0
Prince Edward Island.....	17.0	11.1	67.6	4.3	100.0
Nova Scotia.....	10.6	3.8	84.5	1.1	100.0
New Brunswick.....	10.1	2.8	85.4	1.7	100.0
Quebec.....	6.4	3.0	89.8	0.8	100.0
Ontario.....	3.4	2.4	93.9	0.3	100.0
Manitoba.....	5.2	3.6	90.3	0.9	100.0
Saskatchewan.....	11.3	5.9	71.5	11.3	100.0
Alberta.....	9.4	5.5	82.8	2.3	100.0
British Columbia.....	5.4	4.1	88.6	1.9	100.0
Yukon and Northwest Territories.....	13.5	11.8	74.7	—	100.0
Canada, 1955.....	5.2	2.9	91.0	0.9	100.0
Foods and beverages.....	9.3	3.5	82.4	4.8	100.0
Tobacco and tobacco products.....	1.2	—	98.8	—	100.0
Rubber products.....	0.4	0.4	99.2	—	100.0
Leather products.....	5.5	3.9	90.6	—	100.0
Textiles.....	2.6	1.8	95.5	0.1	100.0
Knitting mills.....	1.4	4.3	94.3	—	100.0
Clothing.....	8.3	8.5	83.2	—	100.0
Wood products.....	17.4	8.5	73.7	0.4	100.0
Paper products.....	0.3	0.3	99.4	—	100.0
Printing, publishing and allied industries ¹	7.8	4.4	86.6	1.2	100.0
Iron and steel products.....	2.1	1.6	96.3	—	100.0
Transportation equipment.....	0.5	0.3	99.2	—	100.0
Non-ferrous metal products.....	1.4	0.9	97.7	—	100.0
Electrical apparatus and supplies.....	0.2	0.2	99.6	—	100.0
Non-metallic mineral products.....	4.2	3.0	92.8	—	100.0
Products of petroleum and coal.....	—	—	100.0	—	100.0
Chemicals and allied products.....	1.0	0.5	98.2	0.3	100.0
Miscellaneous manufacturing industries.....	7.7	4.0	88.1	0.2	100.0

¹ Four main categories of ownership only; the non-classifiable group is not included.

15.—Percentage Distribution of Employment in the Forty Leading Industries by Type of Ownership 1954 and 1955

Year and Industry	Individual Ownership	Partnerships	Incorporated Companies	Co-operatives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1954					
1 Pulp and paper.....	—	—	100.0	—	100.0
2 Non-ferrous metal smelting and refining.....	—	—	100.0	—	100.0
3 Petroleum products.....	—	—	100.0	—	100.0
4 Slaughtering and meat packing.....	1.0	1.7	95.5	1.8	100.0
5 Motor vehicles.....	—	—	100.0	—	100.0
6 Sawmills.....	27.5	12.6	59.5	0.4	100.0
7 Butter and cheese.....	10.3	3.7	63.4	22.6	100.0
8 Primary iron and steel.....	—	—	100.0	—	100.0
9 Aircraft and parts.....	0.1	—	99.9	—	100.0
10 Miscellaneous food preparations.....	5.1	1.4	93.5	—	100.0
11 Railway rolling-stock.....	—	—	100.0	—	100.0
12 Bread and other bakery products.....	26.1	7.5	66.0	0.4	100.0
13 Miscellaneous electrical apparatus and supplies.....	0.2	0.5	99.3	—	100.0
14 Rubber goods, including footwear.....	0.2	0.5	99.3	—	100.0
15 Printing and publishing.....	4.6	2.1	92.1	1.2	100.0

15.—Percentage Distribution of Employment in the Forty Leading Industries by Type of Ownership 1954 and 1955—concluded

Year and Industry		Individual Ownership	Partner- ships	Incor- porated Companies	Co-opera- tives	Total
		p.c.	p.c.	p.c.	p.c.	p.c.
1954—concluded						
16	Clothing, men's factory.....	3.8	7.6	88.6	—	100.0
17	Motor vehicle parts.....	0.8	0.5	98.7	—	100.0
18	Machinery, industrial.....	1.4	0.7	97.9	—	100.0
19	Furniture.....	12.0	7.8	80.2	—	100.0
20	Sheet metal products.....	1.9	1.7	96.4	—	100.0
21	Flour mills.....	1.9	1.8	96.3	—	100.0
22	Telecommunication equipment.....	0.3	0.3	99.4	—	100.0
23	Clothing, women's factory.....	6.0	6.8	87.2	—	100.0
24	Fruit and vegetable preparations.....	4.6	2.5	90.2	2.7	100.0
25	Machinery, heavy electrical.....	—	—	100.0	—	100.0
26	Miscellaneous chemical products.....	1.4	0.3	98.3	—	100.0
27	Sash, door and planing mills.....	16.8	8.4	74.6	0.2	100.0
28	Breweries.....	—	—	100.0	—	100.0
29	Cotton yarn and cloth.....	0.1	—	99.9	—	100.0
30	Boxes and bags, paper.....	1.1	1.4	97.5	—	100.0
31	Feeds, stock and poultry, prepared.....	15.6	6.9	59.0	18.5	100.0
32	Printing and bookbinding.....	13.6	7.5	77.2	1.7	100.0
33	Brass and copper products.....	1.7	2.2	96.1	—	100.0
34	Shipbuilding.....	0.3	0.2	99.5	—	100.0
35	Bridge building and structural steel.....	—	—	100.0	—	100.0
36	Miscellaneous paper goods.....	1.6	0.8	97.6	—	100.0
37	Fish processing.....	8.4	2.9	82.2	6.5	100.0
38	Tobacco, cigars and cigarettes.....	1.7	—	98.3	—	100.0
39	Acids, alkalies and salts.....	—	—	100.0	—	100.0
40	Castings, iron.....	2.2	3.0	94.8	—	100.0
1955						
1	Pulp and paper.....	—	—	100.0	—	100.0
2	Non-ferrous metal smelting and refining.....	—	—	100.0	—	100.0
3	Petroleum products.....	—	—	100.0	—	100.0
4	Motor vehicles.....	—	—	100.0	—	100.0
5	Slaughtering and meat packing.....	1.0	1.1	96.0	1.9	100.0
6	Sawmills.....	25.8	11.9	61.7	0.6	100.0
7	Primary iron and steel.....	—	—	100.0	—	100.0
8	Butter and cheese.....	9.6	3.6	63.7	23.1	100.0
9	Aircraft and parts.....	0.1	—	99.9	—	100.0
10	Miscellaneous electrical apparatus and supplies.....	0.2	0.3	99.5	—	100.0
11	Rubber goods, including footwear.....	0.4	0.3	99.3	—	100.0
12	Miscellaneous food preparations.....	2.8	1.0	96.2	—	100.0
13	Bread and other bakery products.....	25.4	7.0	67.2	0.4	100.0
14	Motor vehicle parts.....	0.8	0.5	98.7	—	100.0
15	Printing and publishing.....	4.4	1.9	92.5	1.2	100.0
16	Telecommunication and equipment.....	0.3	0.2	99.5	—	100.0
17	Furniture.....	12.0	7.2	80.8	—	100.0
18	Sheet metal products.....	1.6	1.4	97.0	—	100.0
19	Machinery, industrial.....	1.1	0.4	98.5	—	100.0
20	Clothing, men's factory.....	3.5	7.6	88.9	—	100.0
21	Railway rolling-stock.....	—	—	100.0	—	100.0
22	Sash, door and planing mills.....	16.4	7.7	75.9	—	100.0
23	Fruit and vegetable preparations.....	4.4	2.9	89.3	3.4	100.0
24	Cotton yarn and cloth.....	0.1	—	99.9	—	100.0
25	Clothing, women's factory.....	5.2	5.8	89.0	—	100.0
26	Flour mills.....	1.0	1.9	97.1	—	100.0
27	Miscellaneous chemical products.....	1.7	0.3	98.0	—	100.0
28	Brass and copper products.....	1.8	1.6	96.6	—	100.0
29	Boxes and bags, paper.....	1.1	1.3	97.6	—	100.0
30	Breweries.....	—	—	100.0	—	100.0
31	Printing and bookbinding.....	13.4	7.7	77.3	1.6	100.0
32	Machinery, heavy electrical.....	0.1	—	99.9	—	100.0
33	Feeds, stock and poultry, prepared.....	16.2	6.6	58.0	19.2	100.0
34	Castings, iron.....	2.3	1.9	95.8	—	100.0
35	Acids, alkalies and salts.....	—	—	100.0	—	100.0
36	Miscellaneous paper goods.....	1.0	0.8	98.2	—	100.0
37	Tobacco, cigars and cigarettes.....	1.5	—	98.5	—	100.0
38	Fish processing.....	8.6	2.7	82.6	6.1	100.0
39	Synthetic textiles and silk.....	—	—	100.0	—	100.0
40	Bridge building and structural steel.....	—	—	100.0	—	100.0

Subsection 4.—Leading Manufacturing Industries

The rank of the ten leading industries in 1955, from the standpoint of selling value of factory shipments, is compared with their respective ranks in significant years since 1929 in the following statement:—

Industry	1929	1933	1939	Rank in—		1953	1954	1955
				1944	1949			
Pulp and paper.....	1	1	2	5	1	1	1	1
Non-ferrous metal smelting and refining....	9	2	1	2	3	2	2	2
Petroleum products.....	10	6	6	14	5	5	3	3
Motor vehicles.....	4	11	5	7	4	3	5	4
Slaughtering and meat packing.....	2	3	3	1	2	4	4	5
Sawmills.....	5	14	8	11	6	6	6	6
Primary iron and steel.....	16	31	11	13	8	7	8	7
Butter and cheese.....	6	5	4	10	7	9	7	8
Aircraft and parts.....	1	1	1	4	1	8	9	9
Miscellaneous electrical apparatus and supplies.....	2	2	2	2	2	17	13	10

¹ Did not rank among the forty leading industries in that year.
1953 and later years.

² Classification not comparable with

A prominent feature of Canadian manufacturing development during the past 25 years has been the rapid growth of non-ferrous metal smelting. This industry, based upon the rich base-metal resources of the country, has taken its place among the leading manufactures along with the industries based upon forest and livestock and other agricultural resources. During World War II the industries engaged in producing the equipment needed by the Armed Forces, such as shipbuilding, aircraft, automobiles, miscellaneous chemical products, and primary iron and steel, advanced to higher positions. When the War ended, the industries engaged in the production of consumer goods bettered their positions.

During the past few years the ranking has changed little. Petroleum products continue to move closer to the top, being in third place in 1955 as compared with fifth in 1953. Miscellaneous electrical apparatus and supplies moved up from seventeenth place to tenth in the same comparison.

16.—Principal Statistics of the Forty Leading Manufacturing Industries ranked according to the Value of Factory Shipments 1954 and 1955

Year and Industry	Estab-lish-ments	Em-ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
1954	No.	No.	\$	\$	\$	\$
1 Pulp and paper.....	125	60,837	252,598,383	515,257,595	641,410,070	1,241,558,451
2 Non-ferrous metal smelting and refining.....	22	26,048	102,595,970	515,315,655	352,037,956	922,578,998
3 Petroleum products.....	61	12,476	52,316,208	568,541,677	309,795,241	909,252,514
4 Slaughtering and meat packing..	154	22,999	78,699,090	674,151,921	157,683,565	837,508,480
5 Motor vehicles.....	20	27,949	106,062,439	477,309,375	176,473,282	666,286,542
6 Sawmills.....	7,696	57,010	139,571,531	301,118,370	263,629,457	572,186,498
7 Butter and cheese.....	1,467	20,599	55,021,826	304,836,171	99,403,809	412,205,330
8 Primary iron and steel.....	51	28,861	108,817,430	145,110,350	217,487,185	383,154,196
9 Aircraft and parts.....	47	35,095	135,863,490	158,893,485	181,381,957	343,010,830
10 Miscellaneous food preparations.	333	10,131	28,462,266	213,194,908	90,418,116	306,451,294
11 Railway rolling-stock.....	36	29,214	96,862,444	162,219,587	116,736,335	283,398,567
12 Bread and other bakery products.....	2,584	33,883	83,804,862	131,119,614	139,859,357	280,207,889
13 Miscellaneous electrical apparatus and supplies.....	157	23,624	82,252,578	123,156,174	145,639,347	267,574,423
14 Rubber goods (including footwear)	73	20,894	67,476,405	106,501,858	149,073,979	264,184,787
15 Printing and publishing.....	800	29,401	100,474,627	71,646,945	182,853,728	256,699,637
16 Clothing, men's factory.....	582	31,886	67,578,714	132,032,166	106,794,010	240,390,285
17 Motor vehicle parts.....	180	18,363	65,540,443	122,691,526	112,253,910	239,108,407
18 Machinery, industrial.....	312	22,846	80,489,646	83,932,026	147,169,756	233,670,284
19 Furniture.....	1,775	29,876	77,605,556	108,912,963	121,987,089	232,704,198
20 Sheet metal products.....	343	18,049	61,444,775	118,832,538	112,234,492	232,686,878
21 Flour mills.....	85	4,934	15,436,871	195,322,299	35,031,653	232,363,041
22 Telecommunication equipment..	120	18,020	56,392,238	124,696,952	104,044,924	228,511,630
23 Clothing, women's factory.....	808	27,343	61,448,428	115,988,150	102,520,868	218,614,357
24 Fruit and vegetable preparations	453	15,815	34,714,828	31,554,963	82,838,842	215,030,451
25 Machinery, heavy electrical....	63	22,220	83,108,479	70,205,741	127,755,711	202,150,926
26 Miscellaneous chemicals, n.e.s..	258	13,483	43,449,377	101,390,267	91,475,977	201,340,257
27 Sash, door and planing mills.....	1,852	19,386	47,398,127	119,759,450	77,231,041	200,200,315

16.—Principal Statistics of the Forty Leading Manufacturing Industries ranked according to the Value of Factory Shipments 1954 and 1955—concluded

Year and Industry	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
1954—concluded						
28 Breweries.....	62	8,541	33,422,844	47,590,063	147,835,626	198,360,169
29 Cotton yarn and cloth.....	50	19,865	49,447,295	119,204,720	70,729,737	194,691,131
30 Boxes and bags, paper.....	204	13,883	40,632,423	116,589,711	77,323,737	194,242,948
31 Feeds, stock and poultry, pre- pared.....	678	6,107	15,345,800	152,472,708	35,646,991	190,132,599
32 Printing and bookbinding.....	1,765	24,207	72,212,660	67,106,324	118,661,593	186,897,471
33 Brass and copper products.....	156	8,530	30,131,125	99,886,257	56,179,619	157,907,751
34 Shipbuilding.....	76	19,356	65,256,543	56,259,981	98,572,656	156,006,890
35 Bridge building and structural steel.....	43	10,881	42,167,982	67,131,407	87,577,222	156,102,978
36 Miscellaneous paper goods.....	212	10,001	29,880,119	89,823,366	65,488,700	155,429,948
37 Fish processing.....	586	14,202	26,001,277	95,632,683	55,219,381	153,456,535
38 Tobacco, cigars and cigarettes.....	39	7,418	24,000,407	79,009,327	72,327,224	152,033,653
39 Acids, alkalies and salts.....	43	8,408	33,425,864	49,400,551	79,376,289	142,001,601
40 Castings, iron.....	202	13,748	47,535,297	61,661,101	76,070,172	139,904,793
Totals, Leading Industries.	24,573	846,389	2,694,946,667	6,995,460,925	5,486,829,904	12,800,827,932
Totals, All Industries.....	38,028	1,267,966	3,896,687,691	9,241,857,554	7,902,124,137	17,554,527,504
Percentage of leading industries to all industries.....	64.6	66.8	69.2	75.7	69.4	72.9
1955						
1 Pulp and paper.....	125	62,205	265,298,119	546,079,192	689,818,173	1,326,938,138
2 Non-ferrous metal smelting and refining.....	24	28,606	118,189,378	710,762,890	443,805,081	1,211,716,481
3 Petroleum products.....	61	13,340	57,892,387	642,872,134	373,368,531	1,048,834,455
4 Motor vehicles.....	15	33,429	134,661,758	631,181,084	269,601,907	907,410,923
5 Slaughtering and meat packing..	153	23,655	83,006,946	627,479,460	178,578,637	809,467,773
6 Sawmills.....	7,333	58,586	152,556,819	338,870,204	296,904,188	644,482,990
7 Primary iron and steel.....	50	32,507	136,879,403	212,288,266	291,793,126	526,318,453
8 Butter and cheese.....	1,423	20,444	56,670,536	315,926,042	103,069,896	427,092,300
9 Aircraft and parts.....	52	33,036	130,269,009	140,831,164	208,800,111	354,314,837
10 Miscellaneous electrical appar- atus and supplies.....	157	23,292	82,125,157	158,683,158	159,116,892	325,061,144
11 Rubber goods, including footwear	82	21,913	73,774,964	137,074,770	187,029,017	322,412,379
12 Miscellaneous food preparations..	304	9,426	27,861,731	209,020,810	89,950,469	303,751,181
13 Bread and other bakery products	2,618	34,416	87,760,004	133,299,250	146,133,537	289,019,294
14 Motor vehicle parts.....	188	19,996	74,581,239	149,004,157	130,778,716	285,070,612
15 Printing and publishing.....	789	29,855	107,844,086	75,020,033	197,778,684	275,159,495
16 Telecommunication equipment..	126	19,036	61,741,290	155,719,565	112,579,145	263,420,279
17 Furniture.....	1,822	30,623	84,242,386	125,400,624	132,521,922	261,551,101
18 Sheet metal products.....	361	19,080	66,662,817	138,211,294	121,016,972	260,167,480
19 Machinery, industrial.....	321	23,838	86,529,705	102,668,897	146,908,572	252,944,378
20 Clothing, men's factory.....	570	31,445	68,809,295	137,857,666	113,367,324	250,462,315
21 Railway rolling-stock.....	32	25,400	86,257,623	139,475,062	102,324,180	245,739,330
22 Sash, door and planing mills.....	1,837	20,239	52,185,678	148,364,225	86,268,605	238,281,804
23 Fruit and vegetable preparations	459	17,151	38,939,576	143,958,545	97,208,879	234,075,326
24 Cotton yarn and cloth.....	50	21,537	56,411,050	149,561,429	77,291,220	229,684,041
25 Clothing, women's factory.....	750	26,925	61,455,380	121,853,177	103,911,069	226,347,078
26 Flour mills.....	77	4,853	15,478,817	185,004,008	35,538,808	221,894,538
27 Miscellaneous chemical products	261	12,098	43,943,157	112,736,255	96,059,281	218,052,459
28 Brass and copper products.....	157	8,864	32,274,041	150,395,034	64,086,451	216,500,000
29 Boxes and bags, paper.....	208	14,613	43,990,065	129,064,316	83,249,425	213,459,941
30 Breweries.....	58	8,368	34,387,685	48,677,904	158,370,826	210,571,853
31 Printing and bookbinding.....	1,813	24,520	76,452,537	71,517,754	122,560,535	200,961,881
32 Machinery, heavy electrical.....	70	22,216	81,904,903	75,020,917	120,703,089	198,408,790
33 Feeds, stock and poultry.....	769	6,376	16,659,990	147,732,071	38,987,058	189,799,395
34 Castings, iron.....	201	15,266	55,273,998	64,452,041	97,595,101	182,906,534
35 Acids, alkalies and salts.....	45	8,597	35,547,851	61,686,514	95,023,999	172,255,750
36 Miscellaneous paper goods.....	219	10,384	31,854,836	95,278,910	75,228,134	171,945,691
37 Tobacco, cigars and cigarettes.....	40	7,470	25,118,846	84,438,935	78,959,320	162,382,718
38 Fish processing.....	574	14,626	26,320,382	101,921,132	55,304,122	159,888,395
39 Synthetic textiles and silk.....	48	15,408	46,927,250	69,895,625	86,031,246	159,233,708
40 Bridge and structural steel work	49	11,863	46,557,144	79,731,908	76,453,347	157,712,340
Totals, Leading Industries..	24,291	866,102	2,865,297,716	7,889,018,422	6,149,711,595	14,355,677,180
Totals, All Industries.....	38,182	1,298,461	4,142,409,534	10,338,202,165	8,753,450,496	19,513,933,811
Percentage of leading industries to all industries.....	63.6	66.7	69.2	76.3	70.2	73.6

Section 3.—Principal Factors in Manufacturing Production

Subsection 1.—Earnings in Manufacturing Industries*

In 1955 the 38,182 establishments covered employed 287,469 supervisory and office employees and 1,010,992 production workers, a total of 1,298,461 persons. Out of every 1,000 persons employed in manufacturing, 221 were classed as supervisory and office employees and 779 as production workers; the former earned 28 p.c. and the latter 72 p.c. of the total amount paid out as remuneration for services.

A notable feature during the past few years has been the reduction in the disparity between average annual earnings of supervisory and office employees and production workers. In 1939 average annual earnings of production workers were only 56 p.c. of that paid to supervisory and office workers, in 1943 the percentage rose to 76, declined to 69 in 1947 and rose to 74 in 1955. This tendency towards equalization is attributed, in part, to the controls adopted by the Government during the war years which stabilized earnings of supervisory and office workers more so than the earnings of production workers. The increase in average earnings of production workers was also influenced by the fact that large numbers were employed in the highly paid iron and steel industries and by the increase in the number of hours worked, some at overtime pay.

17.—Annual Earnings of Employees in Manufacturing Industries, Significant Years 1917-55

NOTE.—The averages of earnings for the years 1933-45 are strictly comparable with those for the years up to 1924 but not with those for the intervening years. The figures for the latest years—as for the earlier—represent the earnings for complete man-years of work, with no allowance for periods of unemployment. The difference amounts to about 3 or 4 p.c. in the total figures and affects chiefly the seasonal industries.

Year	Supervisory and Office Employees				Production Workers			
	Male	Female	Total Earnings	Average Annual Earnings	Male	Female	Total Earnings	Average Annual Earnings
	No.	No.	\$	\$	No.	No.	\$	\$
1917.....	64,918		85,353,667	1,315	541,605		412,448,177	762
1920.....	78,334		141,837,361	1,811	520,559		575,656,515	1,106
1922.....	71,586		129,836,831	1,814	381,670		359,560,399	935
1924.....	54,379	15,641	130,344,822	1,862	322,719	94,871	404,122,853	968
1926.....	58,245	17,092	142,353,900	1,890	374,244	109,580	483,328,342	999
1929.....	67,731	21,110	175,553,710	1,976	454,768	122,922	601,737,507	1,042
1933.....	67,875	18,761	139,317,946	1,608	287,266	94,756	296,929,878	777
1939.....	98,165	26,607	217,839,334	1,746	415,488	117,854	519,971,819	975
1944.....	126,858	65,700	418,065,594	2,171	744,635	285,689	1,611,555,776	1,564
1945.....	128,601	62,106	417,857,619	2,191	680,620	248,045	1,427,915,830	1,538
1946.....	127,002	54,004	410,875,776	2,270	662,699	214,451	1,329,811,478	1,516
1947.....	135,248	55,852	474,693,800	2,484	721,407	219,243	1,611,232,166	1,713
1948.....	141,038	57,192	532,594,959	2,687	738,721	218,770	1,876,773,231	1,960
1949.....	157,516	64,035	628,427,937	2,836	732,457	217,199	1,963,462,720	2,067
1950.....	164,475	66,578	692,633,349	2,998	736,477	215,767	2,078,634,086	2,183
1951.....	176,943	70,844	816,714,604	3,296	792,394	218,194	2,459,566,313	2,434
1952.....	188,235	74,792	923,905,251	3,513	810,060	215,295	2,713,714,900	2,647
1953.....	195,843	78,382	1,016,679,409	3,707	828,363	224,863	2,940,338,939	2,792
1954.....	199,763	79,173	1,075,101,215	3,854	779,955	209,075	2,821,586,476	2,853
1955.....	206,881	80,588	1,147,142,086	3,990	796,721	214,271	2,995,267,448	2,963

Average earnings of supervisory and office employees in 1955 amounted to \$3,990 which was \$1,154 or 41 p.c. higher than in 1949. Supervisory and office employees in Ontario with \$4,156 were the highest paid. Those in British Columbia were second with \$4,079, Quebec third with \$3,959, and Manitoba fourth with \$3,632. The fact that head offices of many large corporations are located in Toronto, Vancouver, Montreal and Winnipeg tends to raise the average salary in the provinces in which these cities are located.

* Statistics of earnings and hours of work in manufacturing will be found in Chapter XVIII on Labour.

Average earnings of production workers in 1955 amounted to \$2,963 which was \$896 or 43 p.c. higher than in 1949. The manufacturing industries of British Columbia paid the highest average wages of \$3,307. Ontario with \$3,166 was in second place, followed by Saskatchewan with \$3,017, Alberta \$2,977, Manitoba \$2,762, Newfoundland \$2,752, Quebec \$2,695, etc. The high figure of average earnings of production workers in the Yukon and Northwest Territories is the result of the unusual conditions under which industry is carried on in these regions and is not representative. Statistics of the distribution of employees by provinces and groups as well as average annual earnings are given in Table 18.

Ontario has a larger proportion of females among its supervisory and office employees than the other provinces. The same situation prevails in Quebec with regard to production workers, because of the importance of the textile industries in providing employment to females. Of all female production workers engaged in the manufacturing industries of Canada in 1955, 42 p.c. were found in the textile and clothing groups.

18.—Annual Earnings of Employees in Manufacturing Industries, by Province and Industrial Group 1954 and 1955

Year, Province and Industrial Group	Supervisory and Office Employees				Production Workers			
	Male	Female	Total Earnings	Average Earnings	Male	Female	Total Earnings	Average Earnings
	No.	No.	\$	\$	No.	No.	\$	\$
1954								
Newfoundland.....	1,896	338	6,001,893	2,687	6,752	906	24,099,293	3,147
Prince Edward Island.....	341	105	887,343	1,990	946	382	2,112,868	1,591
Nova Scotia.....	3,827	1,032	13,899,172	2,861	21,540	3,212	57,841,068	2,337
New Brunswick.....	2,638	865	10,916,819	3,117	15,673	2,931	44,192,609	2,375
Quebec.....	63,381	24,165	335,074,103	3,827	246,557	89,992	879,587,297	2,614
Ontario.....	98,559	43,279	571,549,485	4,030	365,635	91,441	1,383,217,903	3,026
Manitoba.....	6,074	2,297	29,504,735	3,525	25,514	7,339	86,950,151	2,647
Saskatchewan.....	2,371	832	9,369,753	2,925	7,334	989	24,140,080	2,900
Alberta.....	5,878	1,894	25,181,006	3,240	21,640	3,353	71,728,883	2,870
British Columbia.....	14,754	4,356	72,549,043	3,796	68,243	8,514	247,253,871	3,221
Yukon and Northwest Territories.....	44	10	167,863	3,109	121	16	462,453	3,376
Canada, 1954.....	199,763	79,173	1,075,101,215	3,854	779,955	209,075	2,821,586,476	2,833
Foods and beverages.....	25,396	10,339	124,200,904	3,476	106,476	35,672	352,857,824	2,482
Tobacco and tobacco products.....	779	444	5,583,075	4,565	3,210	5,036	22,285,864	2,703
Rubber products.....	3,576	1,453	20,002,690	3,977	12,355	3,510	47,473,715	2,992
Leather products.....	2,804	1,257	14,918,329	3,674	15,266	11,421	52,243,428	1,958
Textiles (except clothing).....	7,697	3,866	45,684,342	3,951	33,636	19,382	124,511,798	2,348
Knitting mills.....	1,578	1,287	10,373,820	3,621	6,512	12,245	37,204,015	1,983
Clothing (textile and fur).....	7,664	4,426	45,895,052	3,796	22,774	54,829	145,599,823	1,876
Wood products.....	21,488	3,360	64,532,715	2,597	98,899	5,184	258,589,499	2,484
Paper products.....	11,083	4,314	76,210,610	4,950	63,795	8,178	255,345,416	3,548
Printing, publishing and allied trades.....	16,504	10,467	87,884,805	3,258	32,880	8,763	132,391,184	3,179
Iron and steel products.....	29,307	9,837	164,855,267	4,212	127,607	6,947	440,671,262	3,275
Transportation equipment.....	20,575	6,149	117,350,947	4,391	103,186	3,522	361,728,903	3,390
Non-ferrous metal products.....	7,855	2,634	45,478,189	4,336	37,143	2,862	136,713,132	3,417
Electrical apparatus and supplies.....	17,140	7,312	99,068,566	4,052	35,936	14,687	159,441,035	3,150
Non-metallic mineral products.....	4,934	1,625	25,266,739	3,852	26,677	1,993	89,582,340	3,125
Products of petroleum and coal.....	4,522	1,571	25,985,036	4,265	11,402	64	43,696,689	3,811
Chemicals and allied products.....	11,824	6,155	73,411,733	4,083	27,603	6,021	103,900,227	3,090
Miscellaneous industries.....	5,037	2,677	28,398,396	3,681	14,598	8,759	57,350,422	2,455
1955								
Newfoundland.....	1,852	329	6,091,470	2,793	6,959	1,221	22,512,998	2,752
Prince Edward Island.....	357	98	962,201	2,115	955	359	2,111,884	1,607
Nova Scotia.....	3,754	1,076	14,456,233	2,993	22,012	3,376	62,099,690	2,446
New Brunswick.....	2,696	859	11,108,907	3,125	15,913	2,966	45,574,438	2,414
Quebec.....	64,815	24,803	354,837,904	3,959	247,984	91,973	916,240,049	2,695
Ontario.....	103,142	43,679	610,157,207	4,156	373,813	93,238	1,478,748,420	3,166

18.—Annual Earnings of Employees in Manufacturing Industries, by Province and Industrial Group 1951 and 1955—concluded

Year, Province and Industrial Group	Supervisory and Office Employees				Production Workers			
	Male	Female	Total Earnings	Average Earnings	Male	Female	Total Earnings	Average Earnings
	No.	No.	\$	\$	No.	No.	\$	\$
1955—concluded								
Manitoba.....	6,344	2,390	31,719,240	3,632	25,082	7,502	89,999,333	2,762
Saskatchewan.....	2,383	871	9,973,963	3,065	7,264	972	24,851,548	3,017
Alberta.....	6,384	1,995	27,760,078	3,313	22,991	3,476	78,788,737	2,977
British Columbia.....	15,119	4,478	79,930,870	4,079	73,639	9,172	273,879,857	3,307
Yukon and Northwest Territories.....	35	10	144,013	3,200	109	16	460,494	3,684
Canada, 1955.....	206,881	80,588	1,147,142,086	3,990	796,721	214,271	2,995,267,448	2,963
Foods and beverages.....	25,698	10,434	128,857,099	3,566	107,325	36,628	369,929,478	2,570
Tobacco and tobacco products.....	793	428	5,778,275	4,732	3,278	5,030	23,668,616	2,849
Rubber products.....	3,665	1,494	20,926,441	4,056	12,984	3,770	52,848,523	3,154
Leather products.....	2,671	1,221	14,717,680	3,782	15,190	11,493	54,252,596	2,033
Textiles.....	8,397	4,247	50,921,133	4,027	35,815	20,685	136,883,911	2,423
Knitting mills.....	1,409	1,197	9,192,965	3,528	6,384	12,668	38,015,243	1,995
Clothing.....	7,402	4,410	46,444,787	3,932	22,064	55,810	149,991,692	1,926
Wood products.....	21,431	3,531	71,860,965	2,879	103,276	5,435	282,578,932	2,599
Paper products.....	11,309	4,454	79,547,953	5,046	65,858	8,129	270,229,096	3,652
Printing, publishing and allied trades.....	17,056	10,629	94,464,145	3,412	33,313	8,604	140,115,713	3,343
Iron and steel products.....	30,473	10,352	174,476,424	4,274	134,125	6,750	493,180,655	3,501
Transportation equipment.....	22,737	6,164	131,587,688	4,553	99,243	3,645	358,847,308	3,488
Non-ferrous metal products.....	8,275	2,812	50,902,785	4,591	39,210	3,014	150,207,094	3,557
Electrical apparatus and supplies.....	17,931	7,013	101,455,460	4,067	35,410	15,890	162,576,014	3,169
Non-metallic mineral products.....	5,470	1,735	29,503,184	4,095	29,718	2,026	101,503,547	3,198
Products of petroleum and coal.....	4,782	1,547	28,213,364	4,458	11,094	63	44,223,195	3,964
Chemicals and allied products.....	12,349	6,300	78,441,944	4,206	27,362	5,845	106,825,999	3,217
Miscellaneous industries.....	5,033	2,620	29,849,794	3,900	15,072	8,786	59,389,836	2,489

Average Annual Earnings in the Forty Leading Industries.—Variations in average earnings are related to the number of employees in industries or areas where pay levels are above or below the average because of differences in basic pay rates, in sex and occupational distributions, in amounts of bonus or commission payments, in levels of activity, etc. The earnings of salaried men are substantially higher, on the average, than those of other categories, mainly because their numbers include relatively highly paid managerial and professional workers. Women's earnings are generally well below those of men in the same industry, chiefly as a result of pay differentials, occupational differences, the greater incidence of part-time work and absenteeism among women, and their higher proportions of younger and less experienced workers.

In 1955 three industries were paying supervisory and office workers an average of \$5,000 or over, as compared with none in 1951. Indicative of the rapidly changing pattern of remuneration in manufacturing is the fact that in 1945, no industry paid supervisory and office workers annual salaries of over \$3,000. The highest average earnings in that year were \$2,935 reported by the brewing industry. Highest average earnings in 1955, amounting to \$5,636, were received by the supervisory and office employees of the pulp and paper industry which held the premier position for a number of years. Breweries with \$5,539 and non-ferrous metal smelting and refining with \$5,167 were the two other industries with salaries of \$5,000 or over. There were six industries with average salaries of \$4,500 to \$5,000: motor vehicles \$4,977; primary iron and steel \$4,936; acids, alkalies and salts \$4,745; bridge building and structural steel \$4,743; motor vehicle parts \$4,711; and petroleum products \$4,570. In nineteen other industries average salaries ranged between \$4,000 and \$4,500, in eight they were between \$3,500 and \$4,000, and in the remaining four they were below \$3,500.

The average salary for the forty leading industries was \$4,084 as compared with \$3,789 for the smaller industries. The lower average is caused in part by a higher proportion of female office employees in the smaller industries. In the forty leading industries, 26 p.c. of the office employees were female while in the smaller industries 33 p.c. were in that category.

The increase in the average earnings of production workers since 1945 paralleled that of office and supervisory employees. Whereas in 1945 there were only four industries averaging over \$2,000, in 1955 the number jumped to thirty-six. In 1945, the highest annual earnings, amounting to \$2,365, were paid by the motor vehicle industry, while in 1955 the highest earnings, which totalled \$4,189, were paid by the petroleum products industry which had been in first place for a number of years. The highest earnings are usually paid by industries in which the proportion of skilled workers is high and the proportion of female workers is low. Three industries in 1955 had average annual earnings of \$4,000 or more: petroleum products \$4,189; primary iron and steel \$4,089; and pulp and paper \$4,004. Eight other industries had annual averages of \$3,500 to \$4,000. Non-ferrous metal smelting and refining \$3,933, acids, alkalies and salts \$3,856, motor vehicles \$3,764, breweries \$3,705, bridge building and structural steel \$3,665, aircraft \$3,661, printing and publishing \$3,655, and wire and wire goods \$3,539 were in this category. In fifteen other industries average annual earnings ranged between \$3,000 and \$3,500, in ten others they were between \$2,400 and \$3,000, while in the remaining four they were below \$2,000. Men's factory clothing, women's factory clothing, leather footwear, and fruit and vegetable preparations are the industries included in the latter group.

Average annual earnings of production workers in the forty leading industries amounted to \$3,120 as compared with \$2,610 for the smaller industries. The lower average for the smaller industries is caused mainly by a higher proportion of female workers. Employment by sex and average annual earnings in the forty leading industries are given in Table 19.

19.—Annual Earnings of Employees in the Forty Leading Manufacturing Industries 1954 and 1955

NOTE.—Industries ranked according to the aggregate earnings paid.

Year and Industry	Supervisory and Office Employees				Production Workers			
	Male	Female	Total Earnings	Average Annual Earnings	Male	Female	Total Earnings	Average Annual Earnings
	No.	No.	\$	\$	No.	No.	\$	\$
1954								
1 Pulp and paper.....	7,361	2,328	53,304,859	5,502	50,309	839	199,293,524	3,896
2 Sawmills.....	11,713	826	23,468,345	1,872	44,048	423	116,103,186	2,611
3 Aircraft and parts.....	8,080	2,696	46,068,342	4,275	23,560	759	89,795,148	3,692
4 Primary iron and steel.....	3,526	940	21,467,572	4,807	24,265	190	87,349,858	3,581
5 Motor vehicles.....	4,991	1,440	31,003,977	4,821	21,186	232	75,058,462	3,504
6 Non-ferrous metal smelting and refining.....	3,604	578	20,171,958	4,824	21,817	49	82,424,012	3,770
7 Printing and publishing.....	8,414	4,876	45,364,930	3,413	14,063	2,048	55,109,697	3,421
8 Railway rolling-stock.....	2,241	323	11,502,181	4,486	26,537	113	85,360,263	3,203
9 Bread and other bakery products.....	3,793	1,301	14,749,036	2,896	21,905	6,884	69,055,826	2,399
10 Machinery, heavy electrical.....	5,490	1,930	30,991,973	4,177	12,029	2,771	52,116,506	3,521
11 Miscellaneous electrical apparatus.....	4,932	2,133	29,500,244	4,176	11,781	4,778	52,752,334	3,186
12 Machinery, industrial.....	4,970	1,914	28,385,901	4,123	15,517	445	52,103,745	3,264
13 Slaughtering and meat packing.....	3,901	1,303	21,919,954	4,212	14,586	3,209	56,779,136	3,191
14 Furniture.....	4,072	1,202	18,239,906	3,458	22,644	1,958	59,365,650	2,413
15 Printing and bookbinding.....	4,174	1,970	21,853,786	3,557	12,879	5,184	50,358,874	2,788
16 Clothing, men's factory.....	2,651	1,549	15,842,107	3,772	8,701	18,985	51,736,607	1,869
17 Rubber goods, incl. footwear.....	3,576	1,453	20,002,690	3,977	12,355	3,510	47,473,715	2,992
18 Motor vehicle parts.....	2,717	973	16,437,344	4,455	12,716	1,957	49,103,099	3,346
19 Shipbuilding.....	1,987	547	10,065,754	3,972	16,710	112	55,190,789	3,281
20 Clothing, women's factory.....	2,107	1,494	14,638,167	4,065	5,820	17,922	46,810,261	1,972
21 Sheet metal products.....	2,826	1,022	16,152,834	4,198	12,560	1,641	45,291,941	3,189

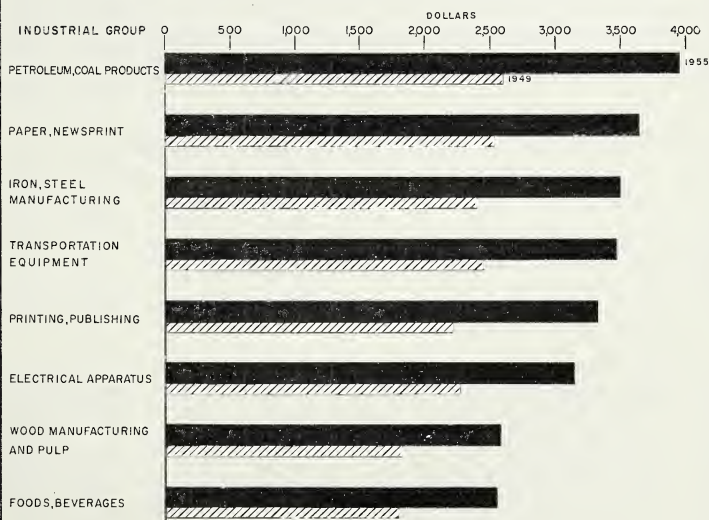
19.—Annual Earnings of Employees in the Forty Leading Manufacturing Industries 1954 and 1955—continued

Year and Industry	Supervisory and Office Employees				Production Workers			
	Male	Female	Total Earnings	Average Annual Earnings	Male	Female	Total Earnings	Average Annual Earnings
	No.	No.	\$	\$	No.	No.	\$	\$
1954—concluded								
22 Telecommunication equipment.....	4,558	2,282	26,288,104	3,843	5,698	5,482	30,104,134	2,693
23 Butter and cheese.....	3,273	1,681	12,793,387	2,582	14,784	861	42,228,439	2,699
24 Petroleum products.....	3,485	1,156	20,557,336	4,430	7,780	55	31,758,872	4,053
25 Cotton yarn and cloth.....	1,564	882	8,965,108	3,665	11,431	5,988	40,482,187	2,324
26 Castings, iron.....	1,600	593	9,213,915	4,202	11,331	224	38,321,382	3,316
27 Sash, door and planing mills.....	3,291	600	11,473,058	2,949	15,340	155	35,925,069	2,318
28 Miscellaneous chemical products.....	2,755	1,163	15,996,177	4,083	7,637	1,928	27,453,200	2,870
29 Hardware, tools and cutlery.....	1,996	925	11,710,472	4,009	8,879	1,464	30,497,057	2,949
30 Footwear, leather.....	1,671	799	8,933,162	3,617	9,497	8,322	33,244,019	1,866
31 Bridge building and structural steel.....	2,320	498	13,264,243	4,707	8,023	40	28,903,739	3,585
32 Miscellaneous iron and steel products.....	2,066	593	10,710,462	4,028	8,571	921	30,219,880	3,184
33 Boxes and bags, paper.....	1,661	820	10,655,823	4,295	6,987	4,415	29,976,600	2,629
34 Synthetic textiles and silk.....	2,409	1,069	13,837,299	3,978	7,765	2,419	26,790,844	2,631
35 Agricultural implements.....	2,289	567	11,690,306	4,093	8,556	93	28,534,665	3,189
36 Fruit and vegetable preparations.....	1,729	957	9,902,293	3,687	6,784	6,345	24,812,535	1,890
37 Acids, alkalis and salts.....	2,034	568	11,696,998	4,495	5,764	42	21,728,866	3,742
38 Breweries.....	1,392	370	9,448,305	5,362	6,702	77	23,974,539	3,537
39 Boilers, tanks and platemaking.....	1,816	567	10,271,417	4,310	5,602	142	20,276,286	3,530
40 Brass and copper products.....	1,322	549	8,254,573	4,412	6,238	421	21,876,552	3,285
Totals, Forty Leading Industries.....	140,357	49,437	746,794,298	3,935	569,597	113,403	2,045,741,498	2,995
Totals, All Industries.....	199,763	79,173	1,075,101,215	3,854	779,955	209,075	2,821,586,476	2,853
1955								
1 Pulp and paper.....	7,559	2,374	55,980,812	5,636	51,498	774	209,317,307	4,004
2 Sawmills.....	11,425	853	26,812,447	2,184	45,870	438	125,744,372	2,715
3 Primary iron and steel.....	3,703	979	23,108,918	4,936	27,636	189	113,770,485	4,089
4 Motor vehicles.....	5,736	1,557	36,286,523	4,977	25,790	346	98,365,235	3,764
5 Aircraft and parts.....	9,092	2,622	52,198,947	4,456	20,746	576	78,070,062	3,661
6 Non-ferrous metal smelting and refining.....	3,954	647	23,771,907	5,167	23,956	49	94,417,471	3,933
7 Printing and publishing.....	8,658	4,951	48,471,807	3,562	14,204	2,042	59,372,279	3,655
8 Bread and other bakery products.....	3,711	1,318	14,522,303	2,888	22,396	6,991	73,237,701	2,492
9 Machinery, industrial.....	5,435	2,104	31,060,027	4,120	15,686	613	55,469,678	3,403
10 Railway rolling-stock.....	2,474	337	12,411,551	4,415	22,554	35	73,846,072	3,269
11 Furniture.....	4,161	1,280	19,933,258	3,664	23,197	1,985	64,309,128	2,554
12 Slaughtering and meat packing.....	3,918	1,286	22,034,636	4,234	15,107	3,344	60,972,310	3,305
13 Miscellaneous electrical apparatus.....	4,594	2,054	27,671,784	4,162	11,526	5,118	54,453,373	3,272
14 Machinery, heavy electrical.....	5,946	2,259	33,548,235	4,089	11,176	2,835	48,356,668	3,451
15 Printing and bookbinding.....	4,323	2,016	23,363,753	3,686	13,144	5,037	53,088,784	2,920
16 Motor vehicle parts.....	2,966	995	18,662,232	4,711	13,662	2,373	55,919,007	4,487
17 Rubber goods, incl. footwear.....	3,665	1,494	20,926,441	4,056	12,984	3,770	52,848,523	3,154
18 Clothing, men's factory.....	2,536	1,521	16,142,829	3,979	8,195	19,193	52,666,466	1,923
19 Sheet metal products.....	2,999	1,115	17,756,589	4,316	13,343	1,623	48,906,228	3,268
20 Telecommunication equipment.....	4,621	1,732	27,526,908	4,333	6,317	6,366	34,214,382	2,999
21 Clothing, women's factory.....	2,001	1,460	14,543,530	4,202	5,538	17,926	46,911,850	1,939
22 Petroleum products.....	4,010	1,261	24,088,434	4,570	8,011	58	33,803,953	4,189
23 Butter and cheese.....	3,255	1,668	13,240,683	2,690	14,715	806	43,429,853	2,798
24 Cotton yarn and cloth.....	2,034	1,179	11,905,273	3,705	11,890	6,434	44,505,777	2,429
25 Shipbuilding.....	1,966	511	9,868,409	3,984	14,248	104	46,299,249	3,226
26 Castings, iron.....	1,814	690	10,727,761	4,284	12,502	260	44,546,237	3,441
27 Sash, door and planing mills.....	3,367	644	12,595,812	3,140	16,047	181	39,589,866	2,490
28 Synthetic textiles and silk.....	2,669	1,177	15,890,590	4,132	8,828	2,734	31,036,660	2,684
29 Bridge building and structural steel.....	2,325	534	13,561,580	4,743	8,984	20	32,995,564	3,665

**19.—Annual Earnings of Employees in the Forty Leading Manufacturing Industries
1954 and 1955—concluded**

Year and Industry	Supervisory and Office Employees				Production Workers			
	Male	Female	Total Earnings	Average Annual Earnings	Male	Female	Total Earnings	Average Annual Earnings
1955—concluded	No.	No.	\$	\$	No.	No.	\$	\$
30 Hardware, tools and cutlery.....	1,915	979	12,357,099	4,270	8,704	1,517	32,224,399	3,153
31 Boxes and bags, paper.....	1,743	875	10,810,471	4,129	7,589	4,406	33,179,592	2,766
32 Miscellaneous chemical products.....	2,823	1,156	17,078,074	4,292	7,125	1,594	26,865,083	3,081
33 Footwear, leather.....	1,598	784	8,913,779	3,742	9,222	8,225	33,926,151	1,945
34 Agricultural implements.....	2,225	576	11,244,548	4,014	8,858	94	30,684,492	3,428
35 Miscellaneous iron and steel products.....	2,037	553	11,001,652	4,248	8,131	486	28,830,355	3,346
36 Fruit and vegetable preparations.....	1,957	1,004	11,275,137	3,808	7,209	6,981	27,664,439	1,950
37 Acids, alkalies and salts.....	2,112	586	12,801,557	4,745	5,847	52	22,746,294	3,856
38 Breweries.....	1,457	389	10,224,567	5,539	6,445	77	24,163,118	3,705
39 Wine and wine goods.....	1,417	601	8,666,174	4,294	6,541	702	25,635,300	3,539
40 Brass and copper products.....	1,366	580	8,604,260	4,422	6,411	507	23,669,781	3,421
Totals, Forty Leading Industries.....	145,567	59,701	801,601,297	4,084	581,832	116,861	2,180,053,544	3,120
Totals, All Industries.....	296,881	89,588	1,147,142,086	3,990	796,721	214,271	2,995,267,448	2,963

**AVERAGE ANNUAL WAGES OF PRODUCTION WORKERS,
SELECTED INDUSTRIES, 1949 AND 1955**



Average Earnings of Production Workers.—In comparing earnings by provinces or groups, consideration should be given to the type of industries in each case since the distribution of industries has a very definite regional significance. In some industries a labour force possessing deftness and speed or the ability to exercise muscular strength is necessary, in others the labour force must exercise craftsmanship or possess a high degree of technical knowledge. Workers in the latter industries naturally command relatively higher wages than those in industries where employees are routine workers.

The ranking of provinces and industries as regards annual earnings is often different from that of weekly or hourly earnings since the factors of number of weeks worked per year and number of hours worked per week enter into the calculation.

20.—Average Annual, Weekly and Hourly Earnings of Male and Female Production Workers Employed in Manufacturing Industries 1946-55

NOTE.—Figures are based on returns received from establishments employing 15 or more persons; figures for 1946 and 1947 refer to the last week in November whereas those for later years refer to the last week in October.

Year	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	\$	\$	cents	No.
Male Production Workers—				
1946.....	1,702	36.23	80.7	44.9
1947.....	1,909	41.35	92.1	44.9
1948.....	2,175	45.73	102.3	44.7
1949.....	2,291	47.33	106.6	44.4
1950.....	2,419	50.93	114.2	44.6
1951.....	2,693	56.46	131.3	43.0
1952.....	2,915	60.85	140.2	43.4
1953.....	3,082	62.71	147.1	42.6
1954.....	3,145	63.98	151.3	42.3
1955.....	3,267	66.86	156.6	42.7
Female Production Workers—				
1946.....	943	20.08	50.2	40.0
1947.....	1,067	23.11	58.2	39.7
1948.....	1,233	25.91	65.1	39.8
1949.....	1,315	27.18	68.3	39.8
1950.....	1,376	29.00	72.5	40.0
1951.....	1,492	31.27	82.5	37.9
1952.....	1,638	34.17	86.3	39.6
1953.....	1,723	35.07	91.0	38.5
1954.....	1,764	35.90	93.3	38.5
1955.....	1,833	37.52	95.2	39.4
All Production Workers—				
1946.....	1,516	32.38	74.1	43.7
1947.....	1,713	37.19	85.1	43.7
1948.....	1,960	41.25	94.6	43.6
1949.....	2,067	42.61	98.4	43.3
1950.....	2,183	45.94	105.6	43.5
1951.....	2,434	51.32	122.2	42.0
1952.....	2,647	55.17	129.5	42.6
1953.....	2,792	56.75	135.9	41.7
1954.....	2,853	57.99	139.8	41.5
1955.....	2,963	60.53	144.2	42.0

**21.—Average Earnings of Production Workers in the Manufacturing Industries,
by Province and Industrial Group 1954 and 1955**

Province and Industrial Group	1954				1955			
	Average Earnings			Average Hours Worked per Week	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly		Annual	Weekly	Hourly	
	\$	\$	cents	No.	\$	\$	cents	No.
Newfoundland.....	2,820	57.57	134.5	42.8	2,752	56.93	137.1	41.5
Prince Edward Island.....	1,591	39.55	87.5	45.2	1,607	39.76	89.8	44.3
Nova Scotia.....	2,337	48.37	117.6	41.1	2,446	51.53	124.6	41.4
New Brunswick.....	2,375	51.28	120.5	42.6	2,414	54.37	125.8	43.2
Quebec.....	2,614	53.04	125.3	42.3	2,695	55.84	128.9	43.3
Ontario.....	3,026	60.83	147.7	41.2	3,166	63.25	152.2	41.6
Manitoba.....	2,647	54.85	133.1	41.2	2,762	57.10	137.1	41.6
Saskatchewan.....	2,900	58.67	141.4	41.5	3,017	60.13	145.3	41.4
Alberta.....	2,870	60.82	146.9	41.4	2,977	61.80	149.7	41.3
British Columbia.....	3,221	66.95	169.2	39.6	3,307	68.88	174.1	39.6
Yukon and Northwest Territories..	3,376	..	..	..	3,681	..	..	..
Canada.....	2,853	57.99	139.8	41.5	2,963	60.53	144.2	42.0
Foods and beverages.....	2,482	50.17	120.1	41.8	2,570	51.88	123.5	42.0
Tobacco and tobacco products.....	2,703	56.28	138.9	40.5	2,849	57.14	141.7	40.3
Rubber products.....	2,992	59.91	144.1	41.6	3,154	65.03	151.3	43.0
Leather products.....	1,958	37.87	100.2	37.8	2,033	42.04	103.6	40.6
Textile products (except clothing)...	2,348	47.43	110.4	43.0	2,423	48.36	111.1	43.5
Clothing (incl. knitting mills).....	1,897	38.08	99.3	38.4	1,940	38.96	98.4	39.6
Wood products.....	2,484	54.52	126.2	43.2	2,599	56.38	129.5	43.5
Paper products.....	3,548	69.15	161.9	42.7	3,652	72.34	168.3	43.0
Printing, publishing and allied trades.....	3,179	66.24	164.6	40.2	3,343	69.35	172.8	40.1
Iron and steel products.....	3,275	65.75	158.2	41.6	3,501	70.63	165.7	42.6
Transportation equipment.....	3,390	67.74	164.1	41.3	3,488	67.82	167.4	40.5
Non-ferrous metal products.....	3,417	66.61	159.6	41.7	3,557	70.02	166.6	42.0
Electrical apparatus and supplies...	3,150	60.62	148.3	40.9	3,169	63.35	149.7	42.3
Non-metallic mineral products.....	3,125	64.03	143.4	44.7	3,198	66.44	147.7	45.0
Products of petroleum and coal.....	3,811	78.58	188.7	41.6	3,964	81.44	196.2	41.5
Chemicals and allied products.....	3,090	60.44	145.5	41.6	3,217	63.20	152.4	41.5
Miscellaneous industries.....	2,455	48.74	115.9	42.1	2,489	49.76	116.6	42.7

**22.—Average Earnings of Male and Female Production Workers in the Manufacturing
Industries, by Province and Industrial Group 1954 and 1955**

Year and Province	Male				Female			
	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week
	\$	\$	cents		\$	\$	cents	
1954								
Newfoundland.....	3,059	61.67	142.5	43.3	1,043	21.01	54.8	38.3
Prince Edward Island.....	1,832	44.47	97.1	45.8	967	23.48	54.6	43.0
Nova Scotia.....	2,520	52.41	126.5	41.4	1,106	23.01	58.5	39.3
New Brunswick.....	2,594	55.16	127.4	43.3	1,209	25.70	68.4	37.6
Quebec.....	2,961	60.28	137.9	43.7	1,661	33.80	87.2	38.7
Ontario.....	3,304	66.54	159.0	41.8	1,916	38.56	100.0	38.6
Manitoba.....	2,939	60.70	144.9	41.9	1,631	33.67	87.1	38.7
Saskatchewan.....	3,056	61.86	146.4	42.3	1,748	35.41	98.8	35.8
Alberta.....	3,037	64.00	152.1	42.1	1,795	37.81	103.2	36.6
British Columbia.....	3,386	70.07	175.2	40.0	1,900	39.31	110.3	35.6
Yukon and Northwest Territories..	..	..	..	..	..	..	..	..
Canada, 1954.....	3,145	63.98	151.3	42.3	1,761	35.90	93.3	38.5

22.—Average Earnings of Male and Female Production Workers in the Manufacturing Industries, by Province and Industrial Group 1954 and 1955—concluded

Year, Province and Industrial Group	Male				Female			
	Average Annual Earn- ings	Average Weekly Earn- ings	Average Hourly Earn- ings	Average Hours Worked per Week	Average Annual Earn- ings	Average Weekly Earn- ings	Average Hourly Earn- ings	Average Hours Worked per Week
	\$	\$	cents	No.	\$	\$	cents	No.
1954—concluded								
Foods and beverages.....	2,786	57.20	132.1	43.3	1,577	32.40	85.5	37.9
Tobacco and tobacco products.....	3,113	64.82	154.0	42.1	2,441	50.85	128.7	39.5
Rubber products.....	3,237	64.82	154.2	42.0	2,133	42.69	106.7	40.0
Leather products.....	2,306	44.48	114.8	38.7	1,492	28.78	78.9	36.5
Textile products (except clothing) ..	2,629	52.93	119.5	44.3	1,861	37.46	92.3	40.6
Clothing (incl. knitting mills).....	2,655	53.79	132.8	40.5	1,566	31.74	84.7	37.5
Wood products.....	2,521	55.41	127.7	43.4	1,787	39.29	97.7	40.2
Paper products.....	3,760	72.80	168.9	43.1	1,891	36.65	93.6	39.2
Printing, publishing and allied trades.....	3,577	74.85	183.7	40.7	1,688	35.35	92.1	38.4
Iron and steel products.....	3,330	66.82	160.2	41.7	2,258	45.33	116.5	38.9
Transportation equipment.....	3,419	68.37	165.2	41.4	2,523	50.46	131.5	38.4
Non-ferrous metal products.....	3,533	68.75	164.3	41.9	1,922	37.43	93.5	40.0
Electrical apparatus and supplies....	3,450	66.81	161.1	41.5	2,415	46.75	118.4	39.5
Non-metallic mineral products.....	3,205	65.57	145.9	45.0	2,045	41.84	103.3	40.5
Products of petroleum and coal.....	3,821	78.78	188.9	41.7	2,102	..	..	..
Chemicals and allied products.....	3,345	65.46	155.5	42.1	1,920	37.56	96.3	39.0
Miscellaneous industries.....	2,884	57.31	132.9	43.1	1,742	34.64	86.0	40.3
1955								
Newfoundland.....	3,053	61.17	145.9	41.9	1,035	20.72	54.5	38.0
Prince Edward Island.....	1,857	45.82	101.5	45.1	940	23.17	55.1	42.0
Nova Scotia.....	2,641	55.62	133.7	41.6	1,173	24.70	62.0	39.9
New Brunswick.....	2,628	58.82	133.9	43.9	1,267	28.33	72.7	39.0
Quebec.....	3,061	63.69	142.6	44.7	1,708	35.53	89.2	39.8
Ontario.....	3,457	69.25	164.4	42.1	1,998	40.06	101.9	39.3
Manitoba.....	3,090	63.38	149.7	42.3	1,666	34.19	87.4	39.1
Saskatchewan.....	3,181	63.70	151.2	42.1	1,797	36.00	98.6	36.5
Alberta.....	3,141	65.16	156.0	41.8	1,894	39.31	103.6	37.9
British Columbia.....	3,473	72.14	180.7	39.9	1,973	40.96	112.4	36.4
Yukon and Northwest Territories.....	..	..	..	..	..	..	..	..
Canada, 1955.....	3,267	66.86	156.6	42.7	1,833	37.52	95.2	39.4
Foods and beverages.....	2,882	59.16	135.9	43.5	1,654	33.96	88.9	38.2
Tobacco and tobacco products.....	3,282	66.30	160.2	41.4	2,567	51.84	130.5	39.7
Rubber products.....	3,434	70.87	162.5	43.6	2,191	45.18	110.6	40.8
Leather products.....	2,417	50.00	119.8	41.7	1,525	31.54	80.7	39.1
Textile products (except clothing) ..	2,702	54.21	120.4	45.0	1,905	38.22	93.4	40.9
Clothing (incl. knitting mills).....	2,725	55.56	133.3	41.7	1,613	32.90	84.8	38.8
Wood products.....	2,635	57.29	131.1	43.7	1,929	41.94	102.5	41.0
Paper products.....	3,858	76.26	176.5	43.2	1,983	39.17	95.6	40.9
Printing, publishing and allied trades.....	3,752	78.17	192.3	40.7	1,756	36.61	95.9	38.2
Iron and steel products.....	3,558	71.76	167.8	42.8	2,359	47.59	119.3	39.9
Transportation equipment.....	3,523	68.45	168.7	40.6	2,537	49.28	127.5	38.6
Non-ferrous metal products.....	3,678	72.41	171.8	42.1	1,986	39.13	96.2	40.7
Electrical apparatus and supplies....	3,529	71.75	164.9	43.5	2,368	48.15	119.8	40.2
Non-metallic mineral products.....	3,271	68.06	150.3	45.3	2,113	43.97	108.5	40.5
Products of petroleum and coal.....	3,974	81.71	196.5	41.6	2,186	..	..	..
Chemicals and allied products.....	3,478	68.31	162.8	42.0	1,994	39.23	100.1	39.2
Miscellaneous industries.....	2,930	59.57	135.1	44.1	1,735	35.29	86.8	40.6

Average Earnings of Supervisory and Office Employees.—The survey on weekly earnings and hours worked by production workers was expanded in 1946 to include supervisory and office employees. Earnings and hours worked are reported for male and female workers separately in 13 groups of hours ranging from 30 hours or fewer to 65 hours or more. The earnings reported for the week is the gross amount paid before deductions for

income tax, unemployment insurance, etc. Weekly and hourly earnings as well as the hours worked are thus obtained directly from the tabulated results of the establishments covered. The annual earnings, however, must be calculated as they are not obtained directly from the survey. To calculate annual earnings, the results on weekly earnings are correlated with the results obtained through the annual Census of Industry.

It is the intention in future to alternate the system of classifying employees. One year the basis will be the hours worked per week and the following year it will be the earnings per week. Information will thus be made available on both the number of hours worked and the range of weekly earnings of employees engaged in manufacturing.

Annual earnings of male supervisory and office employees in 1955 averaged \$4,636, weekly earnings \$93.50 and hourly earnings \$2.36. For female supervisory and office employees annual earnings averaged \$2,332, weekly earnings \$47.02 and hourly earnings \$1.24. Average annual earnings of all supervisory and office employees totalled \$3,990 in 1955, an increase of 76 p.c. since 1946. Weekly earnings at \$80.57 were 84 p.c. higher and hourly earnings at \$2.06 were 93 p.c. higher.

23.—Average Earnings of Male and Female Supervisory and Office Employees in Manufacturing Industries 1946-55

NOTE.—Figures are based on returns received from establishments employing 15 or more persons; figures for 1946 and 1947 refer to the last week in November whereas those for later years refer to the last week in October.

Year	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	\$	\$	cents	No.
Male Supervisory and Office Employees—				
1946.....	..	53.21	126.7	42.0
1947.....	..	60.21	146.1	41.2
1948.....	3,147	63.47	154.4	41.1
1949.....	3,317	65.37	160.2	40.8
1950.....	3,507	69.35	172.5	40.2
1951.....	3,852	77.55	193.9	40.0
1952.....	3,985	82.60	207.0	39.9
1953.....	4,327	86.43	218.8	39.5
1954.....	4,499	90.99	230.9	39.4
1955.....	4,636	93.50	236.1	39.6
Female Supervisory and Office Employees—				
1946.....	..	25.91	65.6	39.5
1947.....	..	28.68	73.7	38.9
1948.....	1,551	31.26	80.5	38.8
1949.....	1,655	32.62	84.5	38.6
1950.....	1,739	34.38	89.5	38.4
1951.....	1,907	38.42	100.6	38.2
1952.....	2,323	41.26	108.6	38.1
1953.....	2,159	43.13	113.8	37.9
1954.....	2,227	45.00	118.7	37.9
1955.....	2,332	47.02	124.1	37.9
All Supervisory and Office Employees—				
1946.....	2,270	43.85	106.7	41.1
1947.....	2,484	49.78	123.2	40.4
1948.....	2,687	52.91	131.3	40.3
1949.....	2,836	54.85	136.8	40.1
1950.....	2,998	58.74	148.0	39.7
1951.....	3,296	65.98	167.0	39.5
1952.....	3,513	70.75	179.6	39.4
1953.....	3,707	73.87	189.4	39.0
1954.....	3,854	77.81	199.5	39.0
1955.....	3,990	80.57	206.1	39.1

24.—Average Earnings of Supervisory and Office Employees in Manufacturing Industries, by Province and Industrial Group 1954 and 1955

Province and Industrial Group	1954				1955			
	Average Earnings			Average Hours Worked per Week	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly		Annual	Weekly	Hourly	
	\$	\$	cents	No.	\$	\$	cents	No.
Newfoundland.....	2,687	71.39	175.4	40.7	2,793	73.59	177.8	41.4
Prince Edward Island.....	1,990	50.04	123.6	40.5	2,115	55.82	136.1	41.0
Nova Scotia.....	2,861	65.91	161.5	40.8	2,993	66.43	161.6	41.1
New Brunswick.....	3,117	66.18	164.2	40.3	3,125	68.26	168.5	40.5
Quebec.....	3,827	76.32	195.7	39.0	3,959	79.25	202.2	39.2
Ontario.....	4,030	79.67	205.3	38.8	4,156	82.47	212.6	38.8
Manitoba.....	3,525	68.30	173.8	39.3	3,632	70.57	178.2	39.6
Saskatchewan.....	2,925	63.96	157.9	40.5	3,065	66.24	164.0	40.4
Alberta.....	3,240	74.38	185.0	40.2	3,313	75.60	189.5	39.9
British Columbia.....	3,796	81.81	208.2	39.3	4,079	85.00	215.7	39.4
Yukon and Northwest Territories..	..	..	..	..	..	..	..	..
Canada.....	3,854	77.81	199.5	39.0	3,999	80.57	206.1	39.1
Foods and beverages.....	3,476	70.78	178.3	39.7	3,566	73.42	184.0	39.9
Tobacco and tobacco products....	4,565	79.50	211.4	37.6	4,732	84.12	222.5	37.8
Rubber products.....	3,977	74.07	189.4	39.1	4,056	75.13	193.1	38.9
Leather products.....	3,674	64.44	162.7	39.6	3,782	66.17	166.3	39.8
Textile products (except clothing)..	3,951	72.94	185.6	39.3	4,027	75.10	187.3	40.1
Clothing (including knitting mills)..	3,763	66.24	168.1	39.4	3,859	66.94	167.8	39.9
Wood products.....	2,597	74.01	181.0	40.9	2,879	76.34	186.7	40.9
Paper products.....	4,950	93.19	247.2	37.7	5,046	95.20	252.5	37.7
Printing, publishing and allied trades.....	3,258	67.30	178.5	37.7	3,412	68.54	182.3	37.6
Iron and steel products.....	4,212	78.30	201.3	38.9	4,274	81.53	209.6	38.9
Transportation equipment.....	4,391	84.40	209.4	40.3	4,553	87.76	218.3	40.2
Non-ferrous metal products.....	4,336	85.75	221.0	38.8	4,591	86.55	224.2	38.6
Electrical apparatus and supplies...	4,052	78.36	202.0	38.8	4,067	83.39	214.9	38.8
Non-metallic mineral products.....	3,852	77.54	198.8	39.0	4,095	81.04	205.2	39.5
Products of petroleum and coal....	4,265	101.28	275.2	36.8	4,458	105.76	286.6	36.9
Chemicals and allied products.....	4,083	79.70	209.7	38.0	4,206	82.41	215.2	38.3
Miscellaneous industries.....	3,681	73.34	189.0	38.8	3,900	75.26	192.5	39.1

25.—Average Earnings of Male and Female Supervisory and Office Employees in Manufacturing Industries, by Province and Industrial Group 1954 and 1955

Year and Province	Male				Female			
	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week
	\$	\$	cents	No.	\$	\$	cents	No.
1954								
Newfoundland.....	2,922	80.34	196.4	40.9	1,365	37.55	94.1	39.9
Prince Edward Island.....	2,241	58.50	143.4	40.8	1,172	30.60	77.0	39.7
Nova Scotia.....	3,228	76.73	184.4	41.6	1,498	35.64	92.3	38.6
New Brunswick.....	3,593	77.96	190.6	40.9	1,660	35.98	92.5	38.9
Quebec.....	4,432	88.64	225.0	39.4	2,243	44.83	118.6	37.8
Ontario.....	4,774	93.91	239.6	39.2	2,334	45.88	121.7	37.7
Manitoba.....	4,083	79.10	199.2	39.7	2,050	39.67	104.4	38.0
Saskatchewan.....	3,305	74.68	183.9	40.6	1,844	41.65	103.9	40.1
Alberta.....	3,685	85.34	210.7	40.5	1,857	43.04	109.8	39.2
British Columbia.....	4,305	93.83	236.3	39.7	2,075	45.22	118.4	38.2
Yukon and Northwest Territories..	..	..	..	..	..	..	..	..
Canada, 1954.....	4,499	90.99	230.9	39.4	2,227	45.00	118.7	37.9

25.—Average Earnings of Male and Female Supervisory and Office Employees in Manufacturing Industries, by Province and Industrial Group 1954 and 1955—concluded

Year, Province and Industrial Group	Male				Female			
	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week
	\$	\$	cents	No.	\$	\$	cents	No.
1954—concluded								
Foods and beverages.....	4,027	81.40	202.5	40.2	2,122	42.87	111.6	38.4
Tobacco and tobacco products.....	5,410	93.84	248.3	37.8	3,078	53.44	143.7	37.2
Rubber products.....	4,630	85.57	217.2	39.4	2,371	43.80	114.7	38.2
Leather products.....	4,339	77.23	190.7	40.5	2,187	38.96	102.8	37.9
Textile products (except clothing)...	4,796	88.28	220.7	40.0	2,269	41.80	110.0	38.0
Clothing (including knitting mills)...	4,662	84.43	209.0	40.4	2,308	41.82	110.1	38.0
Wood products.....	2,788	84.81	202.9	41.8	1,374	41.79	109.4	38.2
Paper products.....	5,863	109.16	288.0	37.9	2,603	48.45	130.9	37.0
Printing, publishing and allied trades.....	4,029	83.19	219.5	37.9	2,043	42.14	113.0	37.3
Iron and steel products.....	4,815	89.57	228.5	39.2	2,412	44.88	118.7	37.8
Transportation equipment.....	4,954	95.28	234.1	40.7	2,507	48.22	124.3	38.8
Non-ferrous metal products.....	4,994	97.90	249.7	39.2	2,372	46.53	124.1	37.5
Electrical apparatus and supplies...	4,736	90.46	231.4	39.1	2,449	46.73	122.7	38.1
Non-metallic mineral products.....	4,392	89.31	225.5	39.6	2,214	45.01	121.0	37.2
Products of petroleum and coal.....	4,944	116.07	313.7	37.0	2,309	54.20	150.1	36.1
Chemicals and allied products.....	4,929	94.51	247.4	38.2	2,460	47.16	125.4	37.6
Miscellaneous industries.....	4,464	89.72	226.6	39.6	2,210	44.42	118.5	37.5
1955								
Newfoundland.....	3,028	81.87	196.8	41.6	1,475	39.85	97.7	40.8
Prince Edward Island.....	2,358	65.59	158.8	41.3	1,221	33.96	84.1	40.4
Nova Scotia.....	3,372	76.48	182.1	42.0	1,669	37.88	98.6	38.4
New Brunswick.....	3,579	79.35	192.1	41.3	1,700	37.70	98.7	38.2
Quebec.....	4,578	91.26	229.9	39.7	2,344	46.74	123.3	37.9
Ontario.....	4,885	96.52	245.6	39.3	2,433	48.03	127.1	37.8
Manitoba.....	4,203	81.04	202.1	40.1	2,114	40.76	106.7	38.2
Saskatchewan.....	3,472	76.35	187.6	40.7	1,951	42.88	108.3	39.6
Alberta.....	3,755	86.18	213.3	40.4	1,900	43.61	113.0	38.6
British Columbia.....	4,618	97.12	244.0	39.8	2,258	47.53	124.4	38.2
Yukon and Northwest Territories..	..	..	..	..	..	..	..	..
Canada, 1955.....	4,636	93.50	236.1	39.6	2,332	47.02	124.1	37.9
Foods and beverages.....	4,119	83.50	205.7	40.6	2,204	44.67	116.9	38.2
Tobacco and tobacco products.....	5,556	98.20	258.4	38.0	3,211	56.74	152.1	37.3
Rubber products.....	4,732	86.67	221.1	39.2	2,399	43.95	114.8	38.3
Leather products.....	4,473	78.49	192.4	40.8	2,268	39.81	105.0	37.9
Textile products (except clothing)...	4,874	88.74	217.0	40.9	2,354	42.83	112.4	38.1
Clothing (including knitting mills)...	4,742	83.18	203.9	40.8	2,471	43.34	112.3	38.6
Wood products.....	3,094	86.58	207.1	41.8	1,572	44.02	115.2	38.2
Paper products.....	5,985	111.47	293.3	38.0	2,663	49.55	133.9	37.0
Printing, publishing and allied trades.....	4,179	84.02	221.7	37.9	2,181	43.84	117.8	37.2
Iron and steel products.....	4,891	93.18	237.7	39.2	2,455	46.77	123.7	37.8
Transportation equipment.....	5,074	98.30	242.7	40.5	2,633	50.98	130.4	39.1
Non-ferrous metal products.....	5,272	99.21	253.7	39.1	2,589	48.75	130.7	37.3
Electrical apparatus and supplies...	4,691	95.57	244.4	39.1	2,472	50.38	132.2	38.1
Non-metallic mineral products.....	4,644	92.20	229.9	40.1	2,364	46.97	125.3	37.5
Products of petroleum and coal.....	5,148	121.46	327.4	37.1	2,322	54.77	150.9	36.3
Chemicals and allied products.....	5,034	96.63	250.3	38.6	2,582	49.53	131.4	37.7
Miscellaneous industries.....	4,713	91.55	229.4	39.9	2,338	45.45	120.6	37.7

A survey of weekly earnings of salaried employees, classified by (1) managerial and professional employees and (2) office workers, was made for the first time in 1951 and will be repeated every third year. Results of the 1954 survey, the latest currently available, are summarized in the 1956 Year Book at p. 660.

'Real' Earnings of Production Workers.—When the index number representing the average yearly earnings of production workers is divided by the consumer price index, on the same base, a measure of 'real' income is obtained. Index numbers for 1946-55 are given in Table 26.

26.—Average Yearly Earnings and Index Numbers of Earnings, Consumer Prices, and Real Earnings of Production Workers in Manufacturing Industries 1946-55

NOTE.—Figures for 1931-43 are given in the 1947 Year Book, p. 560, and those for 1944 and 1945 in the 1956 Year Book, p. 661.

Year	Total Yearly Earnings	Production Workers	Average Yearly Earnings	Index Numbers (1949=100)		
				Average Yearly Earnings	Consumer Price Index	Real Value of Average Yearly Earnings
	\$	No.	\$			
1946.....	1,329,811,478	877,150	1,516	73.3	77.5	94.6
1947.....	1,611,232,166	940,650	1,713	82.9	84.8	97.8
1948.....	1,876,773,231	957,491	1,960	94.8	97.0	97.7
1949.....	1,963,462,720	949,656	2,067	100.0	100.0	100.0
1950.....	2,078,634,086	952,244	2,183	105.6	102.9	102.6
1951.....	2,459,566,313	1,010,588	2,434	117.8	113.7	103.6
1952.....	2,713,714,909	1,025,355	2,647	128.1	116.5	110.0
1953.....	2,940,338,939	1,053,226	2,792	135.1	115.5	117.0
1954.....	2,821,586,476	989,030	2,853	138.0	116.2	118.8
1955.....	2,995,267,448	1,010,992	2,963	143.3	116.4	123.1

Percentages of Earnings to Net Value of Products.—Table 27 shows the relation between earnings of employees in manufacturing industries and the value added by manufacture. Such added values constitute the real production of the manufacturing plant and are alone available for payment of salaries and wages, interest, rent, taxes, repairs and all other overhead charges that ordinarily must be met. The percentage of supervisory employee earnings declined steadily with the increasing manufacturing production from 1924 to 1929, while from 1931 to 1935 and again in 1938 and 1939, the percentage of such earnings to value added was above normal owing to decreased industrial activity. It should be borne in mind, however, that supervisory employees increased 343 p.c. during the period 1917-55 while production workers increased 87 p.c. The percentage of earnings of the latter has fluctuated much less than that of the former. The number of production workers may be adjusted more rapidly to the activity of the industry and wage levels likewise may be adjusted more readily to the price levels of the products. Of the increase in the net value of production since 1939, amounting to \$7,222,398,595, 47 p.c. was passed along in increased earnings.

27.—Percentage of Earnings to Value Added by Manufacture 1946-55

Year	Value Added by Manufacture	Earnings of Supervisory and Office Employees	Earnings of Production Workers	Percentages of—		
				Supervisory and Office Earnings to Value Added	Production Earnings to Value Added	Total Earnings to Value Added
	\$	\$	\$			
1946.....	3,467,004,980	410,875,776	1,329,811,478	11.8	38.4	50.2
1947.....	4,292,055,802	474,693,800	1,611,232,166	11.0	37.6	48.6
1948.....	4,938,786,981	532,594,959	1,876,773,231	10.8	38.0	48.8
1949.....	5,330,566,434	628,427,937	1,963,462,720	11.8	36.8	48.6
1950.....	5,942,058,229	692,633,349	2,078,634,086	11.6	35.0	46.6
1951.....	6,940,946,783	816,714,604	2,459,566,313	11.8	35.4	47.2
1952.....	7,443,533,199	923,905,251	2,713,714,909	12.4	36.5	48.9
1953.....	7,993,069,351	1,016,679,409	2,940,338,939	12.7	36.8	49.5
1954.....	7,902,124,137	1,075,101,215	2,821,586,476	13.6	35.7	49.3
1955.....	8,753,450,496	1,147,142,086	2,995,267,448	13.1	34.2	47.3

Subsection 2.—Capital and Repair Expenditure

The present series of statistics covering expenditure on fixed capital and repairs by manufacturing industries commences with the year 1944.

Capital expenditure by manufacturers in 1955 totalled \$344,700,000 for construction and \$601,800,000 for machinery and equipment, while \$513,200,000 went for repairs. Of the total capital expenditures amounting to \$946,500,000 in 1955, 15 p.c. was reported by the paper products group, 12 p.c. by products of petroleum and coal, 11 p.c. by foods and beverages, 10 p.c. by iron and steel products and 9 p.c. by non-ferrous metal products.

Of the eleven groups reporting capital expenditures of more than \$25,000,000 in 1955, seven reported greater expenditures than during 1954. Of the increases, paper products led the list with expenditures of \$138,900,000 in 1955 as compared with \$87,300,000 in 1954 followed by non-ferrous metal products with \$83,700,000 compared with \$53,600,000. The groups showing lower capital investment in 1955 than in 1954 were transportation equipment, electrical apparatus and supplies, foods and beverages, and textile products.

28.—Capital and Repair Expenditure by the Manufacturing Industries classified by Province and Industrial Group 1954 and 1955 with Totals for 1946-55

Year, Province and Industrial Group	Capital Expenditure			Repair Expenditure		
	Con- struction	Mach- inery and Equip- ment	Total	Con- struction	Mach- inery and Equip- ment	Total
	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000
1946.....	132.2	205.0	337.2	56.8	164.3	221.1
1947.....	184.7	343.2	527.9	62.4	210.7	273.1
1948.....	184.8	394.2	579.0	78.9	253.9	332.8
1949.....	156.6	379.2	535.8	66.7	267.2	333.9
1950.....	135.4	367.1	502.5	67.6	279.0	346.6
1951.....	267.6	525.0	792.6	85.0	337.0	422.0
1952.....	343.6	629.0	972.6	95.2	363.5	458.7
1953.....	324.5	644.5	969.0	94.6	385.5	480.1
1954						
Newfoundland.....	3.5	5.5	9.0	1.9	4.2	6.1
Prince Edward Island.....	—	0.2	0.2	0.1	0.3	0.4
Nova Scotia.....	2.9	7.0	9.9	6.1	7.2	13.3
New Brunswick.....	2.0	6.5	8.5	1.4	8.4	9.8
Quebec.....	72.4	131.5	203.9	22.9	113.9	136.8
Ontario.....	124.3	292.0	416.3	46.0	196.9	242.9
Manitoba.....	15.1	11.9	27.0	3.7	8.2	11.9
Saskatchewan.....	9.8	3.5	13.3	2.6	2.3	4.9
Alberta.....	22.3	27.3	49.6	4.2	10.2	14.4
British Columbia.....	35.3	49.1	84.4	8.7	39.3	48.0
Totals, 1954.....	287.6	534.5	822.1	97.6	390.9	488.5
Foods and beverages.....	38.6	65.7	104.3	13.2	41.2	54.4
Tobacco and tobacco products.....	0.6	2.5	3.1	0.7	1.7	2.4
Rubber products.....	4.6	11.1	15.7	1.0	5.9	6.9
Leather products.....	0.5	1.8	2.3	0.6	2.0	2.6
Textile products (except clothing).....	7.5	21.0	28.5	2.7	14.3	17.0
Clothing (incl. knitting mills).....	2.2	7.6	9.8	1.3	4.0	5.3
Wood products.....	8.4	24.5	32.9	6.5	24.1	30.6
Paper products.....	21.6	65.7	87.3	8.2	75.1	83.3
Printing, publishing and allied trades.....	11.7	19.7	31.4	2.4	4.9	7.3
Iron and steel products.....	22.0	66.4	88.4	12.6	64.0	76.6
Transportation equipment.....	20.9	44.3	65.2	10.9	30.0	40.9
Non-ferrous metal products.....	20.3	33.3	53.6	8.7	40.1	48.8
Electrical apparatus and supplies.....	11.7	20.0	31.7	3.1	13.6	16.7
Non-metallic mineral products.....	19.6	23.6	43.2	2.8	23.8	26.6
Products of petroleum and coal.....	79.6	14.0	93.6	15.7	11.5	27.2
Chemicals and allied products.....	15.1	24.7	39.8	6.2	31.4	37.6
Miscellaneous industries.....	2.7	4.5	7.2	1.0	3.3	4.3
Capital items charged to operating expense.....	—	84.1	84.1	—	—	—

28.—Capital and Repair Expenditure by the Manufacturing Industries classified by Province and Industrial Group 1954 and 1955 with Totals for 1946-55—concluded

Year, Province and Industrial Group	Capital Expenditure			Repair Expenditure		
	Con- struction	Machin- ery and Equip- ment	Total	Con- struction	Machin- ery and Equip- ment	Total
	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000
1955						
Newfoundland.....	2.5	6.6	9.1	1.3	5.4	6.7
Prince Edward Island.....	0.1	0.4	0.5	0.1	0.2	0.3
Nova Scotia.....	15.1	7.0	22.1	5.5	8.2	13.7
New Brunswick.....	2.5	9.8	12.3	2.0	8.4	10.4
Quebec.....	96.3	167.8	264.1	26.2	116.0	142.2
Ontario.....	121.1	290.7	411.8	43.2	209.6	252.8
Manitoba.....	12.6	15.9	28.5	3.9	7.6	11.5
Saskatchewan.....	5.2	3.6	8.8	2.9	1.9	4.8
Alberta.....	39.6	21.8	61.4	5.5	11.1	16.6
British Columbia.....	49.7	78.2	127.9	9.5	44.7	54.2
Totals, 1955.....	344.7	601.8	946.5	100.1	413.1	513.2
Foods and beverages.....	38.5	65.2	103.7	12.7	43.6	56.3
Tobacco and tobacco products.....	1.6	2.8	4.4	0.9	1.7	2.6
Rubber products.....	3.0	12.1	15.1	0.9	6.8	7.7
Leather products.....	0.5	1.8	2.3	0.6	2.3	2.9
Textile products (except clothing).....	7.6	20.4	28.0	2.9	16.6	19.5
Clothing (incl. knitting mills).....	1.4	7.8	9.2	1.2	3.8	5.0
Wood products.....	12.1	30.9	43.0	7.6	29.3	36.9
Paper products.....	33.1	105.8	138.9	8.9	75.1	84.0
Printing, publishing and allied trades.....	6.4	17.7	24.1	2.2	4.4	6.6
Iron and steel products.....	27.0	68.2	95.2	12.6	75.7	88.3
Transportation equipment.....	20.2	34.1	54.3	10.6	28.2	38.8
Non-ferrous metal products.....	37.3	46.4	83.7	8.2	43.8	52.0
Electrical apparatus and supplies.....	8.1	20.4	28.5	2.7	13.3	16.0
Non-metallic mineral products.....	22.2	25.4	47.6	3.0	27.0	30.0
Products of petroleum and coal.....	100.4	8.7	109.1	19.1	8.1	27.2
Chemicals and allied products.....	21.6	34.7	56.3	4.7	30.1	34.8
Miscellaneous industries.....	3.7	7.1	10.8	1.3	3.3	4.6
Capital items charged to operating expense.....	—	92.3	92.3	—	—	—

Subsection 3.—Size of Manufacturing Establishments

The size of a manufacturing establishment is generally measured either by the value of factory shipments or by the number of employees but each of these methods has its limitations. The former measure has to be adjusted for changes in the price level and, as between industries, it makes those in which the cost of raw materials is relatively high appear to operate on a larger scale. The latter takes no account of the differences in capital equipment at different times or in various industries and obviously the increased use of machinery may lead to an increase in production concurrently with a decrease in number of employees.

Size as Measured by Value of Factory Shipments.—In 1946, after heavy wartime production had ceased and reconversion had barely begun, there were 1,442 manufacturing establishments, each with an output of \$1,000,000 or over. Their combined production was valued at \$5,377,870,217 and accounted for 66.9 p.c. of the total for all manufacturing plants. By 1949, the number of factories in that category had increased to 1,926 and the proportion of their production to the total was 74.4 p.c. As a result of the tremendous industrial expansion and the increase in prices of the 1950's, the number of plants with shipments valued at over \$1,000,000 increased to 2,729 in 1955. These plants shipped 79.7 p.c. of the total in that year.

29.—Manufacturing Establishments and Total and Average Production classified by Value of Product Group 1946, 1949, 1954 and 1955

Gross Value Group ¹	Estab- lish- ments	Total Production	Average per Estab- lishment	Estab- lish- ments	Total Production	Average per Estab- lishment
	1946			1949		
	No.	\$	\$	No.	\$	\$
Under \$25,000.....	14,478	138,504,608	9,566	16,176	145,907,685	9,020
\$ 25,000 but under \$ 50,000.....	4,524	162,355,572	35,888	4,884	174,899,010	35,810
50,000 " 100,000.....	3,958	282,976,378	71,495	4,487	320,878,071	71,513
100,000 " 200,000.....	3,060	433,302,078	141,602	3,630	514,921,581	141,852
200,000 " 500,000.....	2,620	824,481,340	314,687	3,195	1,000,486,294	313,141
500,000 " 1,000,000.....	1,167	816,202,278	699,402	1,494	1,041,235,578	696,945
1,000,000 " 5,000,000.....	1,183	2,376,006,853	2,008,459	1,505	3,164,936,378	2,102,948
5,000,000 or over.....	259	3,001,863,364	11,590,206	421	6,116,328,703	14,528,097
Totals and Averages.....	31,249	8,035,692,471	257,150	35,792	12,479,593,300	348,670
	1954 ²			1955 ²		
	No.	\$	\$	No.	\$	\$
Under \$25,000.....	15,734	145,633,669	9,256	15,327	143,480,957	9,362
\$ 25,000 but under \$ 50,000.....	5,278	189,699,244	35,942	5,112	184,847,245	36,159
50,000 " 100,000.....	4,705	337,580,457	71,749	4,781	343,512,650	50,933
100,000 " 200,000.....	4,070	577,543,265	141,903	4,250	608,414,152	143,156
200,000 " 500,000.....	3,833	1,209,151,102	315,458	3,970	1,261,916,569	317,863
500,000 " 1,000,000.....	1,883	1,390,925,128	738,675	2,013	1,411,584,589	701,234
1,000,000 " 5,000,000.....	1,958	4,065,420,589	2,076,313	2,101	4,364,363,277	2,077,279
5,000,000 or over.....	567	9,638,574,050	16,999,249	628	11,195,814,372	17,827,730
Totals and Averages.....	38,028	17,554,527,504	461,621	38,182	19,513,933,811	511,077

¹ In 1952 gross value of products was replaced by value of factory shipments.

² Includes Newfoundland.

Size as Measured by Number of Employees.—In 1946 the 311 establishments employing 500 hands or over accounted for 32.3 p.c. of the total number of employees engaged in manufacturing. In 1955 there were upwards of 380 plants with more than 500 employees, 61 of them with over 1,500. The 380 plants employed 35.4 p.c. of the total workers in all manufacturing establishments.

30.—Establishments and Employees in Manufactures classified by Number of Employees per Establishment 1946, 1949, 1954 and 1955

Employee Group	Estab- lishments	Employees	Average per Estab- lishment	Estab- lishments	Employees	Average per Estab- lishment
	1946			1949		
	No.	No.	No.	No.	No.	No.
Under 5 employees.....	13,810	32,664	2.4	16,647	34,865	2.1
5 to 14 ".....	8,190	67,530	8.2	9,133	75,482	8.3
15 " 49 ".....	5,488	146,939	26.7	5,967	159,012	26.7
50 " 99 ".....	1,759	122,919	69.8	1,905	132,069	69.3
100 " 199 ".....	1,032	144,240	139.7	1,114	156,084	140.1
200 " 499 ".....	659	202,114	306.7	694	213,130	307.1
500 " 999 ".....	311	341,750	1,098.9	332	391,455	1,179.1
1,000 and over.....						
Head offices ¹	—	—	—	—	9,110	—
Totals and Averages.....	31,249	1,058,156	33.9	35,792	1,171,297	32.7

¹ Includes only those head offices that are not located at a plant.

30.—Establishments and Employees in Manufactures classified by Number of Employees per Establishment 1946, 1949, 1954 and 1955—concluded

Employee Group	Estab- lishments	Employees	Average per Estab- lishment	Estab- lishments	Employees	Average per Estab- lishment
	1954 ²			1955 ²		
	No.	No.	No.	No.	No.	No.
Under 5 employees.....	17,127	37,064	2.2	16,762	36,340	2.2
5 to 14 ".....	9,705	79,733	8.2	9,864	81,471	8.3
15 " 49 ".....	6,235	166,443	26.7	6,340	169,575	26.7
50 " 99 ".....	2,055	141,035	68.6	2,082	144,411	69.4
100 " 199 ".....	1,130	156,362	138.4	1,175	163,091	138.8
200 " 499 ".....	726	221,172	304.6	739	227,667	308.1
500 " 999 ".....	242	168,374	695.8	243	167,720	690.2
1,000 " 1,499 ".....	66	80,003	1,212.2	76	91,840	1,208.4
1,500 and over.....	62	201,973	3,257.6	61	200,413	3,285.5
Head offices ¹	—	15,807	—	—	15,933	—
Not classifiable.....	680	—	—	840	—	—
Totals and Averages.....	38,028	1,267,966	33.3	38,182	1,298,461	34.0

¹ Includes only those head offices that are not located at a plant.² Includes Newfoundland.
31.—Manufacturing Establishments classified by Number of Employees and by Province 1954 and 1955

Year and Province or Territory	Employees—					
	Up to 499	500 to 799	800 to 999	1,000 to 1,499	1,500 or Over	Total
	No.	No.	No.	No.	No.	No.
1954						
Newfoundland.....	787	1	—	1	1	790
Prince Edward Island.....	209	—	—	—	—	209
Nova Scotia.....	1,520	—	—	—	6	1,526
New Brunswick.....	1,050	3	1	3	—	1,057
Quebec.....	12,063	57	26	26	19	12,191
Ontario.....	12,996	94	28	28	32	13,178
Manitoba.....	1,513	4	—	3	2	1,522
Saskatchewan.....	1,010	—	—	—	—	1,010
Alberta.....	2,045	5	1	1	—	2,052
British Columbia.....	4,434	14	8	4	2	4,462
Yukon and Northwest Territories.....	31	—	—	—	—	31
Canada, 1954.....	37,658	178	64	66	62	38,028
1955						
Newfoundland.....	782	1	—	1	1	785
Prince Edward Island.....	204	—	—	—	—	204
Nova Scotia.....	1,519	1	2	—	2	1,524
New Brunswick.....	1,045	3	1	3	—	1,052
Quebec.....	12,056	62	23	32	21	12,194
Ontario.....	13,095	94	23	32	32	13,276
Manitoba.....	1,539	5	—	3	2	1,549
Saskatchewan.....	960	—	—	—	—	960
Alberta.....	2,119	5	1	1	—	2,126
British Columbia.....	4,457	12	10	4	3	4,486
Yukon and Northwest Territories.....	26	—	—	—	—	26
Canada, 1955.....	37,802	183	60	76	61	38,182

Size of Establishments in Leading Industries.—Table 32 shows the degree of concentration in some of the leading industries of Canada. Concentration is extremely marked in the motor vehicle, non-ferrous metal smelting and refining, aircraft and parts, railway rolling-stock, pulp and paper, rubber goods, cotton yarn and cloth, and primary iron and steel industries. On the other hand, the degree of concentration is low in such industries as women's factory clothing, furniture, butter and cheese, miscellaneous food preparations and fruit and vegetable preparations.

32.—Percentage Importance of Establishments, each Employing 200 or more Persons, in the 25 Leading Industries 1954 and 1955

Year and Industry		Number of Establishments Employing 200 or more Persons	Percentage of Total Establishments in the Industry	Percentage of Total Shipments in the Industry
1954				
1	Pulp and paper.....	77	61.6	94.3
2	Non-ferrous metal smelting and refining.....	18	81.8	99.3
3	Petroleum products.....	16	26.2	83.0
4	Slaughtering and meat packing.....	31	20.1	75.2
5	Motor vehicles.....	10	50.0	98.5
6	Sawmills.....	22	0.3	27.2
7	Butter and cheese.....	17	1.2	19.0
8	Primary iron and steel.....	14	27.5	91.6
9	Aircraft and parts.....	15	31.9	97.0
10	Miscellaneous food preparations.....	7	2.1	28.1
11	Railway rolling-stock.....	23	63.9	96.6
12	Bread and other bakery products.....	26	1.0	31.4
13	Miscellaneous electrical apparatus and supplies.....	22	14.0	78.5
14	Rubber goods, including footwear.....	21	28.8	91.8
15	Printing and publishing.....	32	4.0	68.1
16	Clothing, men's factory.....	33	5.7	37.2
17	Motor vehicle parts.....	20	11.1	75.8
18	Machinery, industrial.....	28	9.0	55.1
19	Furniture.....	16	0.9	16.1
20	Sheet metal products.....	25	7.3	58.6
21	Flour mills.....	10	11.8	57.3
22	Radios, television sets, and parts.....	23	19.2	87.5
23	Clothing, women's factory.....	5	0.6	4.5
24	Fruit and vegetable preparations.....	4	0.9	27.9
25	Machinery, heavy electrical.....	18	28.6	87.1
1955				
1	Pulp and paper.....	77	61.6	94.1
2	Non-ferrous metal smelting and refining.....	18	75.0	97.7
3	Petroleum products.....	17	27.9	84.1
4	Motor vehicles.....	10	66.7	99.2
5	Slaughtering and meat packing.....	32	20.9	78.3
6	Sawmills.....	24	0.3	28.6
7	Primary iron and steel.....	14	28.0	90.8
8	Butter and cheese.....	17	1.2	19.8
9	Aircraft and parts.....	15	28.8	96.5
10	Miscellaneous electrical apparatus and supplies.....	24	15.3	69.2
11	Rubber goods, including footwear.....	25	30.5	92.9
12	Miscellaneous food preparations.....	4	1.3	21.6
13	Bread and other bakery products.....	26	1.0	31.1
14	Motor vehicle parts.....	21	11.2	75.4
15	Printing and publishing.....	32	4.1	68.8
16	Telecommunication equipment.....	24	19.1	84.9
17	Furniture.....	15	0.8	16.7
18	Sheet metal products.....	23	6.4	55.8
19	Machinery, industrial.....	30	9.3	56.2
20	Clothing, men's factory.....	31	5.4	36.0
21	Railway rolling-stock.....	21	65.6	96.5
22	Sash, door and planing mills.....	1	1	1
23	Fruit and vegetable preparations.....	6	1.3	29.1
24	Cotton yarn and cloth.....	25	50.0	92.2
25	Clothing, women's factory.....	6	0.8	4.8

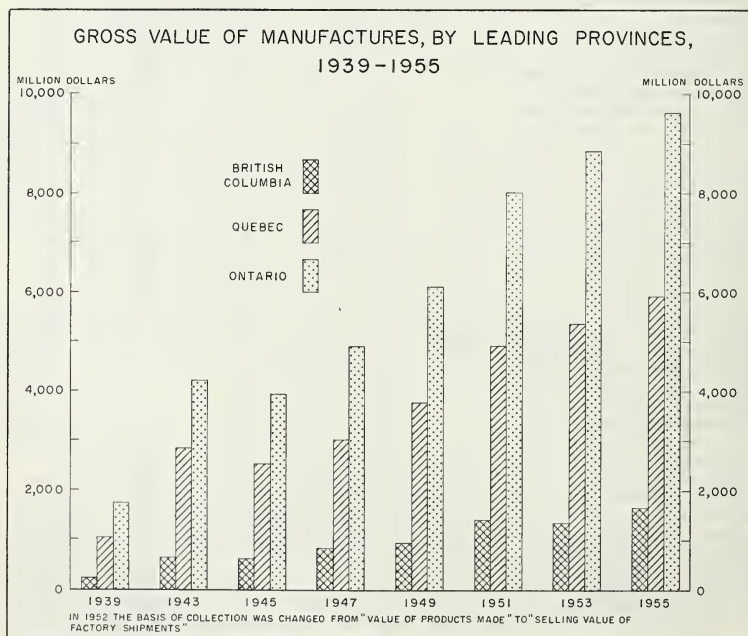
¹ For confidential reasons these figures cannot be published since there are fewer than three establishments.

PART III.—PROVINCIAL AND LOCAL DISTRIBUTION OF MANUFACTURING PRODUCTION

Section 1.—Provincial Distribution of Manufacturing Production

This Section shows the distribution and concentration of the manufacturing industries in each province followed by a general analysis of the leading industries in the individual provinces. Ontario and Quebec are by far the most important manufacturing provinces of Canada. Their combined production in 1955 amounted to \$15,540,000,000 or 80 p.c. of the total factory shipments of manufactured products. The water power and other varied resources of the two provinces and their nearness to the larger markets of Canada and the United States have all contributed to this progress.

Table 1 shows the outstanding predominance of Ontario and Quebec in each industrial group. Quebec leads in the manufacture of tobacco and tobacco products, textiles and clothing, paper products and products of petroleum and coal. In each of the other groups Ontario has the greater production of the two provinces. In the production of wood products British Columbia with 43 p.c. of the total holds the dominant position, outranking both Ontario and Quebec which account for 24 and 21 p.c. respectively of the total. In each of the other groups Ontario and Quebec lead by a wide margin.



1.—Summary Statistics of Manufactures of each Province classified by Industrial Group 1955

NOTE.—Comparable figures for 1954 have not been published in the Canada Year Book but are available from DBS publication *General Review of the Manufacturing Industries of Canada 1954*.

Province and Industrial Group	Estab-lish-ments	Em-ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Newfoundland						
Foods and beverages.....	79	3,778	7,120,919	14,935,828	16,975,709	32,577,013
Leather products.....	5	157	320,820	347,387	303,624	424,149
Textiles.....	5	92	225,664	362,942	214,630	691,620
Clothing.....	3	144	229,470	228,421	291,931	520,551
Wood products.....	618	1,592	1,915,560	4,137,104	3,109,705	7,414,604
Paper products ²	2	3,380	15,223,920	26,099,089	32,667,953	62,615,842
Printing, publishing and allied trades	37	420	1,148,987	657,593	1,975,721	2,682,303
Iron and steel products.....	9	295	822,385	730,500	1,609,702	2,386,439
Transportation equipment.....	4	12	25,680	16,800	50,652	50,222
Electrical apparatus and supplies.....	1	1	1	1	1	1
Non-metallic mineral products.....	13	340	1,180,549	1,398,780	2,536,342	4,333,494
Products of petroleum and coal.....	1	1	1	1	1	1
Chemicals and allied products.....	5	78	224,468	742,303	689,105	1,429,900
Miscellaneous industries ³	5	73	168,046	258,109	181,848	452,899
Totals, Newfoundland.....	785	10,361	28,604,468	49,914,856	60,586,922	115,579,036
Prince Edward Island						
Foods and beverages.....	96	1,141	1,972,077	13,912,837	4,167,143	18,440,442
Tobacco and tobacco products.....	4	4	4	4	4	4
Leather products.....	4	4	4	4	4	4
Textiles.....	4	73	134,254	850,245	424,493	1,251,495
Wood products.....	81	272	322,300	670,534	520,842	1,224,353
Printing, publishing and allied trades	10	158	352,535	154,702	585,867	755,802
Iron and steel products.....	3	24	62,848	64,071	73,108	138,600
Transportation equipment.....	4	4	4	4	4	4
Non-metallic mineral products.....	4	17	31,720	22,440	50,447	78,345
Chemicals and allied products.....	4	4	4	4	4	4
All other groups ³	6	84	198,351	1,128,206	609,760	1,739,794
Totals, Prince Edward Island..	204	1,769	3,071,085	16,803,035	6,431,660	23,628,831
Nova Scotia						
Foods and beverages.....	396	8,350	16,214,923	59,672,469	34,108,760	96,590,160
Leather products.....	4	115	194,218	245,185	283,038	533,096
Textiles.....	11	447	1,081,289	2,757,402	2,367,355	5,324,675
Knitting mills.....	5	752	1,403,401	3,147,421	2,147,858	5,537,785
Clothing.....	10	445	641,525	1,764,177	959,021	2,717,571
Wood products.....	779	4,758	7,461,182	21,280,823	14,102,614	36,018,778
Paper products.....	7	1,457	4,840,314	9,030,538	13,291,340	23,785,924
Printing, publishing and allied trades	136	1,307	3,547,130	2,408,747	6,683,315	9,211,577
Iron and steel products.....	53	6,121	20,649,001	29,186,877	28,144,278	65,038,123
Transportation equipment.....	59	4,683	14,311,177	14,979,681	18,644,372	34,233,709
Electrical apparatus and supplies.....	1	1	1	1	1	1
Non-metallic mineral products.....	29	584	1,569,797	1,725,577	3,732,135	6,058,538
Products of petroleum and coal.....	1	1	1	1	1	1
Chemicals and allied products.....	16	284	808,994	3,104,615	2,392,379	5,529,221
Miscellaneous industries ³	19	915	3,832,972	25,895,907	12,789,958	40,550,533
Totals, Nova Scotia.....	1,524	30,218	76,555,923	175,194,419	139,616,423	331,129,690
New Brunswick						
Foods and beverages.....	346	6,687	12,797,555	73,176,538	31,945,301	107,754,469
Leather products.....	8	303	604,333	1,082,096	1,131,332	2,224,019
Textiles.....	13	670	1,361,428	1,177,243	1,753,154	3,070,618
Knitting mills.....	1	1	1	1	1	1
Clothing.....	6	151	191,281	255,774	298,608	570,931
Wood products.....	501	3,950	7,177,099	19,188,679	12,571,091	32,381,496
Paper products.....	16	4,428	17,283,791	45,355,288	44,988,192	97,980,345
Printing, publishing and allied trades	73	959	2,421,013	1,519,498	4,275,813	5,863,788

For footnotes, see end of table, p. 684.

1.—Summary Statistics of Manufactures of each Province classified by Industrial Group 1955—continued

Province and Industrial Group	Estab-lish-ments	Em-ploy-ees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
New Brunswick—concluded						
Iron and steel products.....	31	1,205	3,378,842	5,162,096	6,091,127	11,517,473
Transportation equipment.....	10	2,473	7,028,876	6,928,950	8,904,393	16,173,716
Non-ferrous metal products.....	1	1	1	1	1	1
Non-metallic mineral products.....	24	539	1,421,816	1,545,417	3,591,894	6,237,887
Products of petroleum and coal.....	1	1	1	1	1	1
Chemicals and allied products.....	7	131	441,001	3,116,055	1,138,912	4,211,083
Miscellaneous industries ^a	17	933	2,576,310	2,397,585	4,118,397	6,843,225
Totals, New Brunswick.....	1,052	22,434	56,683,345	160,905,219	120,808,214	294,829,050
Quebec						
Foods and beverages.....	2,622	46,146	123,843,253	618,697,977	323,979,671	949,487,854
Tobacco and tobacco products.....	33	7,385	24,397,707	82,827,631	74,611,267	156,559,853
Rubber products.....	32	6,745	19,697,454	24,780,045	35,055,289	59,800,237
Leather products.....	344	16,190	33,419,597	48,584,762	51,477,352	100,729,618
Textiles.....	455	39,496	105,464,027	229,891,103	162,833,961	396,695,292
Knitting mills.....	147	10,193	21,302,996	33,375,387	36,212,112	70,112,820
Clothing.....	1,608	56,508	118,981,924	231,827,113	203,306,663	436,026,673
Wood products.....	3,215	32,965	73,803,262	154,623,085	125,214,942	283,743,769
Paper products.....	198	35,851	136,637,150	303,993,776	339,683,881	688,374,500
Printing, publishing and allied trades	1,247	19,182	62,325,924	56,730,493	112,151,873	170,064,348
Iron and steel products.....	679	41,501	142,368,167	201,220,053	254,316,898	463,989,590
Transportation equipment.....	118	81,197	110,468,879	121,072,511	155,564,474	281,343,672
Non-ferrous metal products.....	187	18,919	71,633,330	434,718,997	191,270,904	660,250,574
Electrical apparatus and supplies.....	98	20,468	73,705,658	120,114,280	125,195,684	248,149,015
Non-metallic mineral products.....	339	11,467	37,459,420	52,848,933	85,408,450	152,196,126
Products of petroleum and coal.....	18	4,045	15,784,980	241,599,599	132,863,573	387,331,805
Chemicals and allied products.....	371	21,236	73,975,901	159,643,404	166,549,304	334,497,949
Miscellaneous industries.....	483	10,081	25,813,324	35,392,182	46,651,758	83,013,339
Totals, Quebec.....	12,194	429,575	1,271,077,953	3,152,541,331	2,622,333,056	5,922,367,074
Ontario						
Foods and beverages.....	2,903	71,663	209,350,205	887,227,268	552,454,759	1,454,092,885
Tobacco and tobacco products.....	20	2,131	5,023,832	80,185,810	13,999,304	94,318,568
Rubber products.....	42	15,106	53,895,965	112,162,510	151,674,057	262,157,593
Leather products.....	231	12,559	31,689,202	53,559,676	49,696,897	104,595,157
Textiles.....	384	26,390	74,508,395	159,466,394	138,218,299	303,594,004
Knitting mills.....	131	10,299	23,569,022	37,659,475	37,415,412	76,276,871
Clothing.....	758	24,062	58,447,292	91,282,395	90,643,373	181,796,168
Wood products.....	2,509	35,961	96,350,236	163,181,149	159,299,814	327,624,138
Paper products.....	271	33,911	130,998,856	299,107,920	309,677,328	635,238,218
Printing, publishing and allied trades	1,825	34,963	124,315,459	107,432,095	218,180,427	328,237,043
Iron and steel products.....	1,476	115,318	438,117,690	673,665,987	794,871,975	1,488,210,691
Transportation equipment.....	240	79,789	312,110,672	932,192,669	565,078,192	1,513,678,038
Non-ferrous metal products.....	310	26,709	98,456,533	420,976,114	319,600,466	760,620,623
Electrical apparatus and supplies.....	300	53,841	184,407,008	342,983,423	332,283,086	687,583,811
Non-metallic mineral products.....	523	19,960	69,831,593	90,274,280	158,642,076	266,277,871
Products of petroleum and coal.....	36	7,314	31,001,492	224,709,024	138,702,371	376,579,184
Chemicals and allied products.....	553	25,137	90,764,804	266,606,480	291,452,789	578,133,840
Miscellaneous industries.....	763	18,819	56,067,370	71,552,754	104,764,146	178,628,258
Totals, Ontario.....	13,276	613,872	2,088,905,627	5,014,225,423	4,426,654,771	9,617,642,961
Manitoba						
Foods and beverages.....	369	9,693	30,065,677	159,834,275	68,068,598	230,679,025
Rubber products.....	3	11	15,594	43,443	53,687	97,737
Leather products.....	24	703	1,459,862	3,015,490	2,299,880	5,404,998
Textiles.....	38	818	1,881,208	6,003,993	3,549,822	9,694,337
Knitting mills.....	3	68	132,175	427,030	283,266	721,000
Clothing.....	155	5,800	12,302,847	24,748,700	17,968,907	42,754,448
Wood products.....	316	3,132	7,709,265	14,268,955	12,667,587	27,319,852
Paper products.....	23	1,490	4,924,595	13,104,846	17,196,101	31,416,967

For footnotes, see end of table, p. 684.

1.—Summary Statistics of Manufactures of each Province classified by Industrial Group 1955—continued

Province and Industrial Group	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Manitoba—concluded						
Printing, publishing and allied trades	285	3,725	11,158,700	9,207,026	19,870,426	29,337,415
Iron and steel products	126	4,937	17,574,860	24,796,148	33,009,096	59,374,050
Transportation equipment	28	6,184	19,746,690	18,551,193	22,390,454	41,551,534
Non-ferrous metal products	18	466	1,672,119	9,512,080	10,569,470	20,514,984
Electrical apparatus and supplies	19	872	2,612,640	5,096,462	6,080,256	11,211,665
Non-metallic mineral products	39	1,213	3,807,792	5,441,725	10,887,228	18,217,066
Products of petroleum and coal	6	783	3,027,634	26,165,784	14,371,721	41,966,517
Chemicals and allied products	38	743	1,969,907	6,748,407	5,067,371	12,124,065
Miscellaneous industries	59	680	1,657,008	2,733,208	3,138,238	5,965,421
Totals, Manitoba	1,549	41,318	121,718,573	329,698,765	247,472,108	588,351,051
Saskatchewan						
Foods and beverages	231	4,975	15,098,450	87,444,147	39,314,447	128,279,268
Leather products	1	1	1	1	1	1
Textiles	8	69	145,841	1,063,411	194,785	1,261,676
Knitting mills	1	1	1	1	1	1
Clothing	14	255	582,185	1,042,912	929,883	1,858,279
Wood products	382	1,571	3,182,652	5,898,977	6,248,936	12,408,066
Paper products	4	27	67,325	100,236	135,832	233,096
Printing, publishing and allied trades	188	1,523	4,378,361	2,999,542	7,335,726	10,478,578
Iron and steel products	53	713	2,288,782	3,613,124	3,522,471	7,219,093
Transportation equipment	7	16	36,974	28,134	58,801	90,309
Non-ferrous metal products	1	1	1	1	1	1
Electrical apparatus and supplies	1	1	1	1	1	1
Non-metallic mineral products	34	352	1,018,541	975,838	2,827,320	3,917,962
Products of petroleum and coal	12	1,235	5,071,730	51,999,935	29,989,513	85,153,682
Chemicals and allied products	10	200	743,057	2,255,904	541,533	3,170,604
Miscellaneous industries ^a	17	554	2,211,613	16,656,541	22,499,375	41,091,424
Totals, Saskatchewan	960	11,490	31,825,511	174,078,701	113,598,622	295,162,037
Alberta						
Foods and beverages	419	11,091	33,031,892	192,179,921	78,721,470	272,807,725
Rubber products	1	1	1	1	1	1
Leather products	10	46	103,955	100,932	127,955	224,604
Textiles	19	368	1,231,541	2,837,719	1,922,655	5,108,352
Knitting mills	4	43	80,885	106,578	130,058	259,599
Clothing	24	834	1,778,847	3,282,972	4,293,202	7,662,761
Wood products	989	5,966	13,301,177	28,711,851	27,051,937	56,917,489
Paper products	13	566	1,894,363	5,730,327	4,443,628	10,268,129
Printing, publishing and allied trades	276	2,414	7,148,826	6,079,129	14,324,609	20,573,810
Iron and steel products	153	3,464	12,002,292	18,568,027	22,004,030	40,552,978
Transportation equipment	23	2,831	9,251,106	9,082,564	10,036,263	19,389,748
Non-ferrous metal products	12	685	2,860,212	6,781,443	8,009,851	15,164,078
Electrical apparatus and supplies	9	194	517,640	2,056,107	1,089,032	3,088,129
Non-metallic mineral products	76	2,673	8,236,406	12,111,809	19,897,621	33,035,807
Products of petroleum and coal	21	1,822	7,359,750	65,927,531	47,125,611	116,232,764
Chemicals and allied products	31	1,513	6,717,633	11,822,095	21,822,372	36,865,383
Miscellaneous industries ^a	47	336	1,022,290	643,938	2,307,407	2,996,879
Totals, Alberta	2,126	34,846	106,548,815	366,022,853	263,398,701	641,148,235
British Columbia						
Foods and beverages	667	16,539	49,241,369	212,627,607	107,792,278	323,395,341
Tobacco and tobacco products	1	1	1	1	1	1
Rubber products	4	47	157,359	87,542	233,916	343,474
Leather products	18	493	1,174,079	2,022,191	1,889,722	3,897,639
Textiles	40	721	1,771,397	4,480,124	3,064,231	7,823,376

For footnotes, see end of table, p. 684.

1.—Summary Statistics of Manufactures of each Province classified by Industrial Group 1955—concluded

Province or Territory and Industrial Group	Establishments	Employees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
British Columbia—concluded						
Knitting mills.....	4	247	562,910	759,404	1,076,515	1,836,958
Clothing.....	70	1,487	3,281,108	5,450,474	4,953,085	10,454,440
Wood products.....	2,400	43,443	143,069,559	311,653,033	270,777,218	589,778,471
Paper products.....	46	8,640	37,906,735	90,486,049	105,177,332	204,185,484
Printing, publishing and allied trades	415	5,000	17,730,153	11,965,388	30,225,896	42,550,838
Iron and steel products.....	311	8,118	30,376,187	48,226,842	55,585,752	104,259,300
Transportation equipment.....	104	4,569	17,370,266	14,226,460	28,931,716	43,693,697
Non-ferrous metal products.....	49	5,574	23,061,935	85,644,022	37,168,503	126,984,777
Electrical apparatus and supplies.....	38	708	2,377,583	6,797,351	4,366,222	11,129,767
Non-metallic mineral products.....	90	1,804	6,449,097	8,144,502	14,088,364	23,765,705
Products of petroleum and coal.....	8	1,474	6,486,597	66,298,896	41,236,973	110,852,119
Chemicals and allied products.....	92	2,494	9,508,706	24,519,137	38,770,615	66,069,567
Miscellaneous industries ¹	130	1,050	3,285,687	2,584,646	5,539,170	8,323,563
Totals, British Columbia.....	4,486	102,408	353,810,727	895,973,668	750,877,508	1,679,344,816
Yukon and N.W.T.						
Foods and beverages.....	6	22	50,257	74,082	124,541	211,434
Wood products.....	14	63	147,605	201,303	293,295	512,538
All other groups ²	6	85	406,645	2,568,510	1,314,675	4,027,028
Totals, Yukon and N.W.T.....	26	170	604,507	2,843,895	1,732,511	4,751,000

¹ Cannot be published separately for confidential reasons and therefore included in "Miscellaneous industries".

² Publication authorized by the firms concerned.

³ Includes all groups for which figures cannot be published.

⁴ Cannot be published separately for confidential reasons and therefore included in "All other groups".

⁵ Includes printing, publishing and allied trades, iron and steel products, non-ferrous metal products, products of petroleum and coal, and chemicals and allied products.

2.—Concentration of Manufacturing Production in each Province 1954 and 1955

Province or Territory	1954			1955		
	Number of Establishments Employing 500 or more Persons	Percentage of Total Number of Establishments in Province	Provincial Percentage of Number of Employees Accounted for by these Establishments	Number of Establishments Employing 500 or more Persons	Percentage of Total Number of Establishments in Province	Provincial Percentage of Number of Employees Accounted for by these Establishments
Newfoundland.....	3	0.4	41.1	3	0.4	39.4
Prince Edward Island.....	—	—	—	—	—	—
Nova Scotia.....	6	0.4	29.5	5	0.3	26.8
New Brunswick.....	7	0.7	29.1	7	0.7	28.8
Quebec.....	128	1.0	36.9	138	1.1	37.3
Ontario.....	182	1.4	39.2	181	1.4	39.3
Manitoba.....	9	0.6	23.5	10	0.6	23.9
Saskatchewan.....	—	—	—	—	—	—
Alberta.....	7	0.3	15.1	7	0.3	14.9
British Columbia.....	28	0.6	26.6	29	0.6	26.9
Yukon and Northwest Territories.....	—	—	—	—	—	—
Canada.....	370	1.0	35.9	380	1.0	35.7

Subsection 1.—The Manufactures of the Atlantic Provinces

The Atlantic Provinces are of economic importance in a number of fields, such as pulp and paper, fish processing, sawmills and primary iron and steel. In *Newfoundland* manufacturing production is dominated by the forest and fisheries resources. Pulp and paper was the most important industry in 1955 with shipments valued at \$62,615,842 followed by fish processing with \$17,445,197. These two industries accounted for 69 p.c. of the total production of the Province. In *Prince Edward Island* agriculture and fishing resources, butter and cheese, fish processing, and prepared stock and poultry feeds are the leading industries. *Nova Scotia* is renowned for its coal mines and its fisheries as well as extensive forests and agricultural lands and is favoured with easy access by sea to the high grade iron ore supply of Newfoundland. On these resources are based the leading manufactures of fish processing, primary iron and steel, sawmills, pulp and paper, shipbuilding and butter and cheese. In addition an important petroleum refinery, cotton yarn and cloth, and coke and gas plants add to the diversification of manufacturing in the Province. The forests of *New Brunswick* give a leading place to its pulp and paper and sawmilling industries. Other important manufacturing and processing is based on fish and agricultural resources.

Considering the Atlantic Provinces as an economic unit, pulp and paper was the leading industry in 1955 with factory shipments valued at \$178,103,158. This was followed by fish processing with \$88,652,293, sawmills \$46,516,711, primary iron and steel \$43,561,192, shipbuilding \$26,806,967, and butter and cheese \$25,830,553. These six industries accounted for 53.5 p.c. of the total factory shipments of the Atlantic region. Other leading industries with shipments valued at \$10,000,000 or more were (in order of value): sugar refining, petroleum products, sash, door and planing mills, bread and other bakery products, slaughtering and meat packing, miscellaneous food preparations, railway rolling-stock, printing and publishing, prepared stock and poultry feeds and breweries.

In the Atlantic region the program of industrial development has been more selective than in some of the other provinces. Fish processing, new sawmills, increased pulp-making capacity and the manufacture of non-metallic building materials like cement and gypsum products have accounted for well over 50 p.c. of the industrial growth. There are, however, a few outstanding exceptions. Two sizable defence plants have been established in *Nova Scotia*, one to repair and overhaul naval aircraft and the other to build and repair radar and related electronic equipment. Considerable development has taken place in *Newfoundland*. Besides plants for the manufacture of cement and gypsum wallboard and plaster, factories for producing boots and shoes, birch veneer, cotton textiles, leather and optical goods, industrial machinery and a leather tannery were established, thus broadening the industrial base of the Province.

Despite the rapid development in the Atlantic Provinces since 1949, manufacturing production did not quite keep pace with the development in the more industrialized provinces of Ontario, Quebec and British Columbia. This is indicated by a slight drop in the Atlantic Provinces' share of the Canadian total which declined from 4.5 p.c. in 1949 to 3.9 p.c. in 1955. In number of persons employed there was an increase of 1.0 p.c. for the Atlantic Provinces as compared with an increase of 10.6 p.c. for Canada as a whole. For earnings of employees the increase was 37.8 p.c. as compared with 59.7 p.c. for Canada.

Up to 1952 the increase in employment in the Atlantic Provinces was about the same as for Canada as a whole. From 1953 to 1955, however, employment in the Atlantic Provinces declined by 6.0 p.c. while for Canada as a whole the decline was 2.2 p.c. The increased employment since 1949 reported by Newfoundland, Prince Edward Island and Nova Scotia was offset by a drop of 4.3 p.c. in New Brunswick, resulting in a net increase of only 1.0 p.c. for the Atlantic Provinces as compared with an increase of 10.6 p.c. for Canada. Selling value of factory shipments were 32.5 p.c. higher in the Atlantic Provinces while for Canada as a whole they were 56.2 p.c. higher.

3.—Statistics of the Leading Industries of the Atlantic Provinces 1955

NOTE.—Comparable figures for 1954 have not been published in the Canada Year Book but are available from DBS publication *General Review of the Manufacturing Industries of Canada 1954*.

Industry	Estab-lish-ments	Em-ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Newfoundland						
1 Pulp and paper ¹	2	3,380	15,223,920	26,099,089	32,667,953	62,615,842
2 Fish processing.....	34	2,735	4,329,748	7,831,603	9,238,800	17,445,197
3 Breweries.....	3	175	602,743	775,248	2,607,587	3,397,308
4 Sash, door and planing mills.....	23	285	649,543	2,019,762	964,575	3,100,257
5 Bread and other bakery products.....	14	289	686,831	1,680,373	1,276,534	3,044,927
6 Carbonated beverages.....	11	115	279,879	782,913	1,330,990	2,163,823
7 Sawmills.....	549	919	533,581	966,571	1,090,022	2,114,437
8 Printing and publishing.....	7	256	783,744	343,177	1,490,252	1,869,259
9 Biscuits.....	3	165	430,975	538,317	761,021	1,348,119
10 Other leading industries ²	9	605	2,125,991	4,608,530	4,864,960	9,901,176
Totals, Leading Industries ..	655	8,924	25,646,955	45,645,583	56,292,694	107,000,345
Totals, All Industries.....	785	10,361	23,601,468	49,914,856	60,586,922	115,579,036
Percentage of leading industries to all industries.....	83.4	86.1	89.6	91.4	92.9	92.6
Prince Edward Island						
1 Butter and cheese.....	17	196	408,671	3,917,386	989,484	4,955,875
2 Fish processing.....	36	448	504,080	3,037,721	974,815	4,072,015
3 Feeds, stock and poultry, prepared.....	11	50	85,933	919,342	231,604	1,162,838
4 Fruit and vegetable preparations.....	10	100	110,876	441,651	261,718	725,341
5 Printing and publishing.....	3	143	336,241	138,831	564,228	716,795
6 Sawmills.....	69	138	125,871	293,722	287,604	593,050
7 Other leading industries ³	4	279	784,145	6,878,749	1,958,655	8,969,484
Totals, Leading Industries ..	150	1,354	2,355,817	15,637,492	5,268,103	21,195,898
Totals, All Industries.....	204	1,769	3,071,985	16,803,935	6,431,660	23,628,831
Percentage of leading industries to all industries.....	73.5	76.5	76.6	93.0	81.9	89.7
Nova Scotia						
1 Fish processing.....	194	4,381	7,821,402	32,304,922	14,071,056	47,211,662
2 Primary iron and steel.....	3	4,089	14,542,900	18,838,833	17,925,406	43,561,192
3 Sawmills.....	643	3,247	4,524,842	13,431,162	9,290,391	23,057,289
4 Pulp and paper.....	4	1,215	4,350,655	7,458,206	12,167,547	21,084,371
5 Shipbuilding.....	18	2,889	9,042,542	7,813,661	11,956,277	20,064,822
6 Butter and cheese.....	23	718	1,722,891	7,677,336	3,411,170	11,422,817
7 Bread and other bakery products.....	80	858	1,833,385	3,880,803	3,835,221	8,023,855
8 Sash, door and planing mills.....	64	768	1,593,757	5,089,851	2,401,419	7,612,279
9 Miscellaneous iron and steel products.....	3	676	2,054,041	3,968,514	3,083,479	7,581,324
10 Printing and publishing.....	27	779	2,443,861	1,357,784	4,752,335	6,199,760
11 Knitted goods, not including hosiery.....	3	648	1,250,231	2,878,804	1,925,747	5,035,910
12 Confectionery.....	6	809	1,554,900	2,803,960	1,974,317	5,013,893
13 Fruit and vegetable preparations.....	17	470	719,212	2,146,432	1,424,396	4,122,853
14 Feeds, stock and poultry, prepared.....	13	96	185,550	3,414,184	730,273	4,172,351
15 Carbonated beverages.....	31	295	655,620	1,216,083	2,547,122	3,884,820
16 Miscellaneous food preparations.....	11	182	359,901	1,947,571	1,365,831	3,383,694
17 Fertilizers.....	3	62	172,218	1,542,210	406,780	2,060,120
18 All other leading industries ⁴	15	3,694	12,378,689	40,826,674	28,194,133	71,848,796
Totals, Leading Industries ..	1,158	25,876	67,205,897	158,596,990	121,462,900	295,440,838
Totals, All Industries.....	1,524	30,218	76,555,923	175,194,419	139,646,423	331,129,690
Percentage of leading industries to all industries.....	75.98	85.63	87.79	90.53	86.98	89.22

For footnotes, see end of table, p. 687.

3.—Statistics of the Leading Industries of the Atlantic Provinces 1955—concluded

Industry	Establishments	Employees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
New Brunswick						
1 Pulp and paper.....	7	4,170	16,691,754	43,175,866	43,632,194	94,402,945
2 Sawmills.....	385	2,676	4,448,304	11,817,871	8,700,269	20,751,935
3 Fish processing.....	167	2,570	2,788,224	14,493,253	5,019,835	19,923,419
4 Miscellaneous food preparations....	13	365	675,229	8,444,091	2,757,117	11,431,399
5 Butter and cheese.....	29	449	978,686	6,966,770	2,351,984	9,451,861
6 Slaughtering and meat packing....	3	388	1,295,664	7,153,926	2,069,987	9,330,402
7 Sash, door and planing mills.....	66	895	1,978,667	5,711,307	2,733,043	8,617,415
8 Bread and other bakery products....	61	848	1,765,346	3,750,205	4,057,918	8,122,870
9 Feeds, stock and poultry, prepared	14	198	446,359	5,687,451	850,066	6,635,559
10 Shipbuilding.....	3	1,212	2,863,748	1,554,936	4,838,538	6,536,755
11 Heating and cooking apparatus....	3	621	1,794,587	2,017,808	3,423,444	5,626,652
12 Printing and publishing.....	21	638	1,748,640	825,040	3,169,635	4,064,509
13 Fertilizers.....	3	114	390,724	3,049,236	927,041	3,919,357
14 Carbonated beverages.....	25	210	492,135	812,273	1,599,635	2,503,062
15 Boxes and bags, paper.....	7	181	387,364	1,358,799	951,037	2,322,295
16 Confectionery.....	5	321	623,267	1,165,862	1,048,061	2,286,890
17 Footwear, leather.....	3	289	569,329	1,011,398	1,074,392	2,108,510
18 All other leading industries ¹	9	3,278	10,124,346	31,339,423	20,666,543	54,199,962
Totals, Leading Industries....	824	19,423	50,062,373	150,335,515	109,870,739	272,235,797
Totals, All Industries.....	1,052	22,434	56,683,345	160,905,219	120,808,214	291,829,650
Percentage of leading industries to all industries.....	78.33	86.58	88.32	93.43	90.95	92.34

¹ Publication of these figures was authorized by the firms concerned. ² Includes hydraulic cement; dairy products, *n.e.s.*; miscellaneous food preparations; industrial machinery; gypsum products; paints, varnishes and lacquers.

³ Includes bags, cotton and jute; fertilizers; and slaughtering and meat packing. ⁴ Includes breweries; cotton yarn and cloth; bridge building and structural steel; wire and wire goods; aircraft and parts; salt; coke and gas products; petroleum products; boxes and bags, paper; and railway rolling-stock. ⁵ Includes biscuits; breweries; brass and copper products; brooms, brushes, and mops; hydraulic cement; railway rolling-stock; and sugar refining.

Subsection 2.—The Manufactures of Quebec

Quebec with about 30 p.c. of Canada's total selling value of factory shipments ranks as the second largest industrial province in Canada. Several important factors have contributed to the great industrial development of the Province. Its geographic situation is extremely favourable including as it does that great water highway, the St. Lawrence River with its excellent harbour 800 miles inland. There is also an extensive road system linking the small rural areas to the big industrial centres. Other significant factors include abundant forest resources, water power, minerals, agricultural lands and, of even more importance, an industrious and stable population.

Quebec ranks first in available water power resources, having more than 40 p.c. of the total recorded for all Canada. Its power development has been remarkable and its installation of 8,031,422 h.p. at the end of 1955 represents about 45 p.c. of the total for Canada. The St. Lawrence River Beauharnois development of 1,408,000 h.p. and the Saguenay River Shipshaw development of 1,200,000 h.p. were the two largest in the country until 1955. They are now surpassed only by the Sir Adam Beck-Niagara Generating Station in Ontario.

Quebec has developed its \$5,900,000,000 manufacturing output with such leading industries as pulp and paper, non-ferrous metal smelting and refining, petroleum products, slaughtering and meat packing, cotton yarn and cloth, men's and women's clothing, tobacco, cigars and cigarettes, synthetic textiles and silk, railway rolling-stock and leather

footwear. In common with the rest of Canada, Quebec experienced a great industrial expansion following World War II, an expansion affecting existing industrial areas as well as many towns and villages in the accessible areas of the Province.

Quebec's leading industry is pulp and paper with an output of approximately \$561,000,000 in 1955. Quebec is a principal world centre for the production of newsprint with 55 major pulp and paper plants concentrated in the Three Rivers and Shawinigan Falls districts as well as along the Saguenay, Ottawa and St. Lawrence Rivers. The production of non-ferrous metals has expanded considerably during the past decade. The output of aluminum has made impressive strides during recent years and reached a record total of 612,543 tons in 1955. Quebec, with its new furniture factories, its new titanium smelter and its expanded aluminum-making facilities, is challenging Ontario's long-established lead in such fields of manufacture.

Quebec's industries are not as diversified as those of Ontario, although a number have an output approximately 50 p.c. or more of total Canadian production. Quebec predominates in tobacco, cigar and cigarette industries with 94.0 p.c. of the Canadian total; women's factory clothing 69.5 p.c.; cotton yarn and cloth 67.6 p.c.; men's factory clothing 56.2 p.c.; synthetic textiles and silk 53.0 p.c.; miscellaneous chemical products 44.2 p.c.; non-ferrous metal smelting and refining 43.6 p.c.; pulp and paper 42.3 p.c.; and railway rolling-stock 42.0 p.c.

The manufacturing industries of Quebec, in common with those of other provinces, recovered in 1955 from the minor recession that occurred during 1954. All groups, with the exception of transportation equipment, reported increased value of shipments. For the Province as a whole the increase was 9.8 p.c. as compared with an increase of 11.2 p.c. for Canada. Employment in all groups, with the exception of transportation equipment and leather products, was higher, the increase for the Province being 1.3 p.c. and for Canada 2.4 p.c.

4.—Statistics of the Leading Industries of Quebec 1955

NOTE.—Comparable figures for 1954 have not been published in the Canada Year Book but are available from DBS publication *General Review of the Manufacturing Industries of Canada 1954*.

Industry	Estab-lish-ments	Em-ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
1 Pulp and paper.....	55	27,082	111,707,145	228,491,407	288,688,818	560,899,722
2 Non-ferrous metal smelting and refining.....	11	11,640	47,836,458	343,383,403	152,533,164	528,494,241
3 Petroleum products.....	8	2,621	11,727,358	231,935,327	124,329,573	367,287,829
4 Slaughtering and meat packing.....	41	4,770	15,799,352	131,015,704	32,543,803	163,420,145
5 Miscellaneous electrical apparatus and supplies.....	39	12,026	43,672,331	73,693,585	81,459,477	157,856,059
6 Clothing, women's factory.....	465	17,979	39,541,005	85,355,388	71,581,207	157,363,541
7 Cotton yarn and cloth.....	21	13,844	36,311,037	106,048,378	49,316,900	155,316,025
8 Tobacco, cigars, and cigarettes.....	27	6,938	23,497,830	80,164,825	73,405,757	152,658,093
9 Clothing, men's factory.....	326	16,559	35,180,192	80,596,107	60,441,736	140,851,120
10 Butter and cheese.....	636	5,238	12,776,415	99,403,748	25,026,033	126,595,144
11 Aircraft and parts.....	24	11,066	43,555,248	35,977,014	71,442,013	108,446,781
12 Railway rolling-stock.....	8	11,546	38,866,755	58,366,801	42,962,501	103,324,447
13 Miscellaneous food preparations.....	82	2,717	7,882,774	67,364,371	31,963,154	100,504,224
14 Miscellaneous chemical products, n.e.s.....	82	7,224	23,474,898	58,985,549	35,045,441	96,402,691
15 Furniture.....	593	10,689	27,484,134	42,130,720	43,653,389	86,853,873
16 Synthetic textiles and silk.....	33	10,429	29,632,672	41,430,055	41,856,787	84,443,585
17 Bread and other bakery products.....	947	10,233	24,089,317	40,155,485	39,836,957	82,778,934
18 Sawmills.....	1,575	8,710	15,253,546	49,701,657	30,917,364	81,381,163
19 Brass and copper products.....	38	2,727	9,799,133	58,610,903	21,342,012	81,300,006
20 Machinery, industrial.....	58	7,873	27,489,219	31,608,063	44,557,712	79,474,607
21 Footwear, leather.....	151	11,896	24,434,632	35,013,716	37,783,402	73,058,637
22 Acids, alkalis and salts.....	16	3,639	15,362,020	27,611,019	35,020,839	67,627,636
23 Boxes and bags, paper.....	61	4,876	13,190,510	41,175,316	25,199,342	66,700,213
24 Sheet metal products.....	88	5,013	17,152,521	33,560,733	32,690,477	65,384,524
25 Printing and publishing.....	83	7,027	25,111,290	18,771,387	46,097,753	65,308,222
26 Feeds, stock and poultry, prepared.....	262	1,818	4,435,976	51,151,794	11,150,238	63,063,453
27 Rubber goods, including footwear.....	32	6,745	19,697,454	24,780,045	35,055,289	59,800,237

4.—Statistics of the Leading Industries of Quebec 1955—concluded

Industry	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
28 Shipbuilding.....	11	7,291	23,961,643	22,390,193	35,512,476	58,502,238
29 Sash, door and planing mills.....	784	5,844	12,907,211	32,959,399	20,869,089	54,814,897
30 Printing and bookbinding.....	615	7,241	21,800,953	18,743,257	35,050,482	54,397,997
31 Breweries.....	4	2,428	10,017,588	15,401,426	37,035,911	53,669,936
32 Primary iron and steel.....	15	3,689	14,368,957	16,693,689	34,025,151	53,577,923
33 Medicinal and pharmaceutical pre- parations.....	93	3,691	11,921,189	16,410,747	35,987,320	52,641,448
34 Bridge and structural steel work.....	13	3,964	15,116,195	25,711,349	24,417,119	50,618,169
35 Telecommunication equipment.....	27	5,267	19,433,527	27,227,779	24,051,322	50,412,887
36 Distilled liquors.....	8	2,331	8,062,568	17,301,926	31,155,162	47,865,949
37 Carbonated beverages.....	185	2,761	7,624,976	13,653,179	32,362,278	47,031,620
38 Miscellaneous paper goods, <i>n.e.s.</i>	73	2,613	7,292,055	24,464,899	18,848,523	43,703,612
39 Clothing, children's factory.....	127	5,485	10,242,119	22,468,613	16,845,793	39,606,109
40 Wire and wire goods.....	33	2,843	10,566,526	22,219,163	16,734,243	39,580,957
Totals, Leading Industries¹.....	7,750	298,373	918,606,729	2,452,128,119	1,948,796,097	4,523,018,894
Totals, All Industries.....	12,194	429,575	1,271,077,953	3,152,541,331	2,622,333,056	5,922,367,074
Percentage of leading industries to all industries.....	63.56	69.46	72.27	77.78	74.31	76.37

¹ Sugar refining is also a leading industry but statistics are confidential.

Subsection 3.—The Manufactures of Ontario

Ontario, one of the world's major industrial areas, accounts for approximately half of Canada's manufacturing production. Here, the proximity of raw materials, cheap hydro-electric power, and a strategic location in relation to export markets, not only on this Continent but overseas, have been the decisive factors of development. Most of the manufactures of the Province and most of its population are located in the southern area. This area has the inestimable advantage of bordering on the St. Lawrence-Great Lakes waterway system, which gives access westward to the heart of the Continent and eastward to the shipping routes of the world, and which is also the source of most of Ontario's hydro-electricity. Many new industrial areas are being created as new industries and branch plants of established industries are increasingly being located in the smaller towns.

Despite the great industrial progress made by other provinces, Ontario continues to maintain its predominance and in 1955 produced 49 p.c. of the nation's manufactured goods. Steel ingot capacity is increasing. Huge investments have gone into the construction of plants in Sarnia for a whole group of new products based on Alberta oil flowing through the Edmonton-Sarnia pipeline. Other significant developments are taking place in synthetic rubber, synthetic textiles, and industrial and consumer chemicals. Ontario has continued to gain in such traditional lines as motor vehicles, industrial and farm machinery, and the manufacture of household equipment, business and office machinery, and electrical apparatus and supplies. Numerous plants making aircraft components and building materials have favoured the Toronto area, and chemical and synthetic textile plants have been rising in the vicinity of Sarnia and along the lower reaches of the St. Lawrence River between Cornwall and Kingston.

Ontario also has the greatest diversification of manufacturing production of any province. Certain industries, such as the manufacture of motor vehicles, motor vehicle parts, heavy electrical machinery, agricultural implements, machine tools, starch and glucose, bicycles, and the processing of raw tobacco are carried on practically in this Province alone. Of the forty leading industries in Canada in 1955, a substantial number of them were dominated by Ontario's share of the total production. These industries, with the percentage which the production of each bears to the 1955 Canada total

are as follows: motor vehicles 98.9 p.c., motor vehicle parts 96.1 p.c., heavy electrical machinery 91.0 p.c., rubber goods 81.3 p.c., telecommunications equipment 79.2 p.c., primary iron and steel 78.4 p.c., iron castings 70.7 p.c., fruit and vegetable preparations 65.6 p.c., aircraft and parts 64.9 p.c., miscellaneous paper products 63.0 p.c., sheet metal products 59.0 p.c., printing and bookbinding 58.5 p.c., brass and copper products 58.3 p.c., industrial machinery 57.1 p.c., acids, alkalis and salts 53.8 p.c., paper boxes and bags 52.1 p.c., furniture 50.5 p.c., and miscellaneous chemical products 50.0 p.c.

There are also a number of medium-sized industries with a total Canadian production of over \$100,000,000 in which Ontario dominated: agricultural implements to the extent of 92.4 p.c., soaps and washing compounds 88.4 p.c., refrigerators, vacuum cleaners, etc., 80.1 p.c., household and office machinery 73.9 p.c., hardware, tools and cutlery 71.6 p.c., heating and cooking apparatus 69.6 p.c., and confectionery 56.5 p.c.

The manufacturing industries of Ontario in 1955 reported \$9,617,642,961 as the selling value of factory shipments, an increase of 12.7 p.c. over the previous year. This was the highest on record and exceeded the previous high attained in 1953 by 8.3 p.c. Accompanying the increase in shipments was an increase of 2.5 p.c. in the number of employees which totalled 613,872 in 1955.

5.—Statistics of the Leading Industries of Ontario 1955

NOTE.—Comparable figures for 1954 have not been published in the Canada Year Book but are available from DBS publication *General Review of the Manufacturing Industries of Canada 1954*.

Industry	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
1 Motor vehicles.....	9	32,491	131,049,092	626,514,547	264,274,618	897,044,382
2 Non-ferrous metal smelting and refining.....	9	10,595	43,368,237	256,783,209	218,573,605	492,930,068
3 Primary iron and steel.....	18	23,369	102,907,093	171,581,869	228,709,663	412,013,769
4 Pulp and paper.....	41	19,108	83,226,439	167,312,533	209,562,479	401,749,103
5 Slaughtering and meat packing....	56	8,740	81,382,574	243,146,755	76,940,650	321,452,118
6 Petroleum products.....	14	5,456	23,840,217	183,614,354	111,638,401	305,587,774
7 Motor vehicle parts.....	108	18,813	70,811,811	144,231,441	124,702,990	274,068,620
8 Rubber goods, including footwear....	42	15,106	53,895,965	112,162,510	151,674,057	262,157,593
9 Aircraft and parts.....	23	19,036	77,331,466	100,513,012	125,984,113	229,943,128
10 Telecommunication equipment....	85	13,344	40,976,136	127,534,970	85,120,352	208,665,818
11 Machinery, heavy electrical.....	47	20,357	75,623,014	66,635,308	110,935,543	180,540,736
12 Miscellaneous electrical apparatus and supplies.....	98	10,908	37,299,630	80,170,090	75,164,084	159,963,621
13 Fruit and vegetable preparations....	201	10,804	26,427,874	92,750,395	64,907,714	153,580,451
14 Sheet metal products.....	190	11,314	40,096,857	81,284,310	70,490,712	153,471,849
15 Butter and cheese.....	461	7,466	22,316,516	107,002,656	39,896,128	150,108,668
16 Machinery, industrial.....	189	13,228	49,007,631	61,038,874	83,390,729	144,554,309
17 Printing and publishing.....	299	13,527	52,575,335	36,958,228	95,156,027	133,240,955
18 Furniture.....	712	15,083	67,767,818	61,194,442	68,760,514	132,115,815
19 Castings, iron.....	92	9,831	36,747,202	59,724,787	68,937,322	129,285,805
20 Brass and copper.....	91	5,301	19,801,401	87,350,242	38,443,888	126,223,042
21 Bread and other bakery products....	842	14,581	38,462,549	54,169,161	62,217,114	120,458,289
22 Printing and bookbinding.....	771	12,996	42,031,349	43,500,618	73,076,895	117,547,549
23 Miscellaneous food preparations....	111	4,285	13,515,544	75,190,639	38,630,768	115,738,579
24 Boxes and bags, paper.....	104	7,447	24,021,898	66,353,996	44,352,162	111,316,154
25 Miscellaneous chemical products, <i>n.e.s.</i>	130	4,839	18,437,653	47,714,441	55,605,926	109,049,859
26 Refrigerators, vacuum cleaners and appliances.....	56	7,655	24,618,410	51,260,785	49,340,027	108,659,268
27 Miscellaneous paper goods.....	119	6,735	21,645,026	58,685,127	48,560,622	108,380,913
28 Agricultural implements.....	31	10,859	39,447,957	55,355,001	50,109,735	105,283,706
29 Hardware, tools and cutlery.....	272	9,731	34,219,823	35,515,579	59,598,910	95,637,098
30 Breweries.....	21	3,293	14,488,568	20,417,659	72,616,224	94,470,237
31 Acids, alkalis and salts.....	21	4,455	17,876,310	30,991,574	52,176,835	92,645,255
32 Flour mills.....	45	2,016	6,389,800	75,743,399	14,556,486	90,998,121
33 Soaps, washing compounds and cleaning preparations.....	70	3,138	12,130,847	40,278,638	47,501,506	88,510,371
34 Tobacco processing and packing....	10	1,612	3,428,168	75,926,144	8,488,102	84,649,507
35 Railway rolling-stock.....	13	5,726	21,053,889	49,635,074	32,559,228	83,079,946

5.—Statistics of the Leading Industries of Ontario 1955—concluded

Industry	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
36 Feeds, stock and poultry, prepared	340	2,876	7,657,422	61,219,900	18,643,109	81,093,831
37 Heating and cooking apparatus...	68	5,980	20,345,984	41,306,115	37,014,551	78,592,179
38 Wire and wire goods.....	69	5,581	20,871,107	39,233,512	37,859,066	78,563,195
39 Machinery, household, office and store.....	46	5,412	19,445,930	35,084,936	42,657,368	78,548,988
40 Clothing, men's factory.....	152	10,242	24,437,319	37,127,659	37,795,977	74,413,309
Totals, Leading Industries...	6,076	413,341	1,486,977,861	3,862,214,489	3,196,621,200	7,186,333,473
Totals, All Industries.....	13,276	613,872	2,088,905,627	5,014,225,423	4,426,654,771	9,617,642,961
Percentage of leading industries to all industries.....	45.77	67.33	71.18	77.03	72.21	74.72

Subsection 4.—The Manufactures of the Prairie Provinces

The leading industries of the Prairie Provinces are those based on agricultural resources—grain-growing, cattle-raising and dairying areas. Next in importance generally are industries providing for the more necessary needs of the resident population, such as the baking of bread, printing and publishing, etc. The extensive railway services require large shops for the maintenance of rolling-stock, especially in the Winnipeg area. The widespread use of motor vehicles and power machinery on farms has given rise to petroleum refineries in each province. The greatly increased production of crude petroleum in Alberta will undoubtedly lead to further development of the refining industry. This industry, which was in second place in 1955, has made tremendous strides in the Prairie Provinces since 1949. It has increased its proportion of the total manufacturing production of the Prairie Provinces from 8.5 p.c. in 1949 to 15.8 p.c. in 1955. In Manitoba, the early commercial centre of the Prairies, natural resources of accessible water powers, forests and, more recently, minerals, have given rise to quite a diversification of industrial production. In Saskatchewan, while the main economic role continues to be played by agriculture, oil and uranium are coming into prominence.

In water power resources the Prairie Provinces are not so well endowed as the more highly industrialized provinces of Quebec, Ontario and British Columbia. At the end of 1955 power installation in the three Provinces totalled only 1,191,845 h.p. or about 7 p.c. of the Canadian total. However, developments of natural gas and oil will, in large measure, be able to overcome a lack of water power resources which is so vital to industrial development.

In the Prairie Provinces the nature of development varies from one province to another. Alberta has moved to the forefront, especially since 1950. There the emphasis has been more on the manufacture of machinery and equipment, including products like drill bits and tanks, heat exchangers and other bulky equipment for the burgeoning oil and gas industries. Chemicals, and especially petrochemicals, have made striking gains; second in terms of new growth, they now embrace various rayon intermediates and polythene plastics, as well as fertilizers and the manufacture of other new inorganic products like caustic soda and chlorine. Sizable gains have been made by the expansion of food processing plants and the construction of additional factories for making building materials.

Manitoba, next to Alberta in value of shipments, experienced great development in manufacturing production during the War and postwar periods although, percentage-wise, it did not keep pace with the other two Prairie Provinces. Since 1946, however, development has been on a wide front. The increase in the number of persons employed totalled 2,951, about 42 p.c. of which was reported by the iron and steel group. In 1955 the foods and

beverages group was in first place as an employer of labour, followed in order by transportation equipment, clothing, iron and steel products, printing, publishing and allied trades, and wood products. These six industries accounted for 81 p.c. of the manufacturing employment of Manitoba.

Developments in Saskatchewan have continued along more or less traditional lines. The largest gains in shipments have been recorded by the food processing industry and a substantial increase has also been shown by the building materials group, which includes non-metallic mineral products and lumber. However, the largest single gain in employment has been in the refining of oil for local use.

6.—Statistics of the Leading Industries of the Prairie Provinces 1955

NOTE.—Comparable figures for 1954 have not been published in the Canada Year Book but are available from DBS publication *General Review of the Manufacturing Industries of Canada 1954*.

Industry	Estab-lish-ments	Em-ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Manitoba						
1 Slaughtering and meat packing...	12	3,086	11,167,353	74,765,409	23,355,502	98,777,029
2 Petroleum products.....	4	559	2,202,272	25,303,618	13,711,135	40,235,459
3 Butter and cheese.....	69	1,289	3,607,075	21,448,747	6,589,501	28,510,065
4 Railway rolling-stock.....	4	4,512	14,603,629	13,258,120	14,398,580	28,149,876
5 Flour mills.....	7	569	1,606,149	21,098,858	3,264,146	24,516,430
6 Clothing, men's factory.....	49	2,714	5,239,070	12,776,639	7,885,503	20,568,831
7 Miscellaneous food preparations...	24	597	1,903,509	13,474,175	4,947,237	19,165,052
8 Furniture.....	134	1,760	4,570,788	9,136,730	7,392,043	16,693,786
9 Pulp and paper.....	3	526	2,201,874	4,352,491	10,365,042	15,869,633
10 Printing and publishing.....	78	1,890	5,650,480	4,607,118	10,935,502	15,694,108
11 Bread and other bakery products.	141	1,670	4,500,251	6,348,857	7,632,665	14,483,055
12 Clothing, women's factory.....	27	1,648	3,752,564	7,437,013	5,244,638	12,719,630
13 Breweries.....	6	560	2,261,594	1,996,040	9,548,406	11,754,695
14 Printing and bookbinding.....	79	1,246	3,824,148	3,199,067	6,467,990	9,743,811
15 Sheet metal products.....	21	890	2,951,729	5,054,125	4,187,868	9,582,763
16 Boxes and bags, paper.....	9	607	1,826,140	5,243,647	3,373,362	8,715,530
17 Feeds, stock and poultry, prepared.	35	227	590,391	5,918,740	1,400,427	7,449,509
18 Miscellaneous iron and steel products.....	11	603	2,182,303	2,756,555	3,372,254	6,222,685
19 Bags, cotton and jute.....	4	206	573,132	4,647,304	891,525	5,575,614
20 Carbonated beverages.....	22	379	1,048,819	2,155,949	3,221,769	5,538,802
21 Sash, door and planing mills.....	33	592	1,587,055	2,679,109	2,290,951	5,062,055
22 Other leading industries.....	9	3,525	13,167,058	22,325,841	35,566,507	60,665,820
Totals, Leading Industries...	781	29,655	91,017,383	269,984,152	186,042,553	465,694,238
Totals, All Industries.....	1,549	41,318	121,718,573	329,698,765	247,472,108	588,351,081
Percentage of leading industries to all industries.....	50.42	71.77	74.78	81.89	75.18	79.15
Saskatchewan						
1 Petroleum products.....	10	1,194	4,941,003	51,666,324	29,567,048	84,368,378
2 Flour mills.....	9	759	2,516,654	34,784,680	7,769,089	42,919,439
3 Slaughtering and meat packing...	9	1,067	3,745,614	21,397,228	8,685,543	30,440,467
4 Butter and cheese.....	58	1,262	3,393,044	21,040,805	6,982,706	28,277,847
5 Bread and other bakery products.	100	1,102	2,972,894	4,363,711	5,319,637	9,994,720
6 Breweries.....	5	361	1,386,473	1,946,634	7,443,197	9,528,164
7 Printing and publishing.....	98	1,181	3,419,958	2,087,633	5,915,936	8,125,377
8 Sash, door and planing mills.....	33	440	1,198,838	2,768,332	1,948,040	4,819,953
9 Sawmills.....	303	727	1,016,240	1,747,213	2,493,115	4,339,875
10 Carbonated beverages.....	24	265	643,141	1,452,193	2,002,287	3,632,967
11 Sheet metal products.....	7	256	815,809	2,035,136	1,548,348	3,514,423
12 Feeds, stock and poultry, prepared	10	75	217,722	1,726,025	673,218	2,246,456
Totals, Leading Industries*...	666	8,689	26,267,390	147,015,914	80,298,164	232,208,066
Totals, All Industries.....	960	11,490	31,825,511	174,078,701	113,598,622	295,162,037

For footnotes, see end of table.

6.—Statistics of the Leading Industries of the Prairie Provinces 1955—concluded

Industry	Estab- lish- ments	Em- ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Alberta						
1 Slaughtering and meat packing...	15	3,812	13,203,518	100,556,076	25,503,904	126,627,676
2 Petroleum products.....	18	1,803	7,327,419	65,810,758	47,008,996	115,989,698
3 Butter and cheese.....	100	1,883	5,065,208	27,929,126	8,529,705	36,892,935
4 Flour mills.....	11	772	2,104,729	26,112,119	4,427,599	30,953,838
5 Sawmills.....	761	3,007	5,335,850	10,254,325	12,873,546	23,853,097
6 Sash, door and planing mills.....	122	1,843	4,970,922	13,455,437	8,309,832	22,086,702
7 Bread and other bakery products.	140	1,872	5,015,245	7,234,534	9,029,352	16,668,022
8 Breweries.....	6	516	1,917,391	3,001,716	10,739,333	13,893,013
9 Railway rolling-stock.....	3	1,911	6,053,983	7,290,727	6,053,983	13,550,513
10 Concrete products.....	39	895	2,972,769	6,672,879	6,905,834	13,191,008
11 Printing and publishing.....	80	1,296	3,990,763	3,440,054	9,280,799	12,816,143
12 Bridge and structural steel work...	4	690	2,665,443	5,114,721	5,830,571	10,991,597
13 Acids, alkalies and salts.....	3	375	1,891,258	2,216,018	5,472,148	8,760,740
14 Miscellaneous food preparations...	13	280	775,192	4,884,292	3,237,127	8,349,820
15 Feeds, stock and poultry, prepared	46	265	729,103	5,800,000	1,776,159	7,740,064
16 Clothing, men's factory.....	9	688	1,473,358	2,945,899	3,826,376	6,851,528
17 Sheet metal products.....	13	474	1,559,717	3,351,355	3,097,444	6,363,485
18 Printing and bookbinding.....	81	872	2,696,423	1,826,013	4,091,343	5,981,900
19 Machine shops.....	68	745	2,669,736	1,797,817	3,950,421	5,874,698
20 All other leading industries ³	8	2,090	8,493,082	20,390,217	29,836,182	52,165,242
Totals, Leading Industries...	1,540	26,089	80,911,169	320,114,083	209,780,654	539,601,719
Totals, All Industries.....	2,126	34,846	106,548,815	366,022,853	263,308,701	641,148,235
Percentage of leading industries to all industries.....	72.44	74.87	75.94	87.46	79.67	84.16

¹ Includes aircraft and parts, bridge and structural steel work, hydraulic cement, gypsum products, non-ferrous metal smelting and refining, and primary iron and steel. ² Non-ferrous metal smelting and refining is also a leading industry but statistics are confidential since there are fewer than three firms reporting. ³ Includes hydraulic cement, fertilizers, non-ferrous metal smelting and refining, primary plastics, and sugar refining.

Subsection 5.—The Manufactures of British Columbia

British Columbia, with factory shipments totalling \$1,679,344,816 in 1955, ranked third among the provinces in manufacturing production. This Province increased its share of the total Canadian output from 7.1 p.c. in 1939 to 8.6 p.c. in 1955.

Forest resources, fisheries, minerals and electric power have given a broad base and wide diversification to its industrial development. The sawmilling industry ranked first in 1955 with a gross value of shipments of \$414,944,542, and pulp and paper second with \$169,370,459. British Columbia holds the dominant position among the provinces in the production of wood products, its output making up 43 p.c. of the Canadian total. Third in importance was the petroleum products industry with shipments valued at \$101,985,120. This industry received great impetus in the completion of the Trans Mountain oil pipeline. In 1953 it had ranked seventh with shipments valued at \$40,562,462. The Province also accounted for approximately 41 p.c. of the output of the nation's fish processing industry in 1955 and plays a large part in making Canada the largest fish exporting nation in the world.

A feature of recent progress has been that new developments are taking place in areas far removed from accepted industrial centres. Growing lines of communication and transportation are fanning out from and leading into formerly locked interior communities to tap a vast new potential and offer new sources of provincial economic unity and strength. Factories and plants in remote sections are drawing greater value in employment and dollars from natural resources. The growth of the Province industrially may be indicated by the increase in employment—in 1955, more than two and one-half times the prewar

figure. In dollar terms, gross value of manufacturing was up more than sixfold since 1939. The consumption of 5,200,000,000 kwh. of electric power during 1955 marked a steady upward climb of 150 p.c. in the past decade.

British Columbia ranks second among the provinces in available water power resources and its hydraulic development, which at the end of 1955 totalled 2,439,508 h.p. out of a Canadian total of 17,735,221 h.p., was exceeded only by Quebec and Ontario.

The manufacturing industries of British Columbia expanded during 1954, at a time when the remainder of Canada experienced a minor recession, and continued to expand during 1955. In the latter year the number of employees was 6.8 p.c. higher than in 1954 and the value of factory shipments was 13.9 p.c. higher. These figures compared with 2.4 p.c., and 11.2 p.c. respectively for Canada as a whole.

7.—Statistics of the Leading Industries of British Columbia 1955

NOTE.—Comparable figures for 1954 have not been published in the Canada Year Book but are available from DBS publication *General Review of the Manufacturing Industries of Canada 1954*.

Industry	Estab-lish-ments	Em-ployees	Earnings	Cost at Plant of Materials Used	Value Added by Manufacture	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
1 Sawmills.....	1,875	31,316	103,743,623	212,624,169	196,773,735	414,944,542
2 Pulp and paper.....	12	6,651	31,632,621	68,910,308	92,139,670	169,370,459
3 Petroleum products.....	4	1,165	5,396,040	62,798,044	36,676,504	101,985,120
4 Sash, door and planing mills.....	219	3,632	11,509,030	49,629,951	32,293,670	72,655,254
5 Veneers and plywoods.....	14	5,398	18,684,125	32,112,195	37,200,046	70,059,477
6 Fish processing.....	72	3,415	9,793,365	40,705,672	24,108,389	65,644,446
7 Slaughtering and meat packing.....	10	1,478	5,575,050	42,375,624	7,889,450	50,561,130
8 Miscellaneous food preparations.....	42	869	2,384,593	35,440,293	5,965,684	41,782,663
9 Fertilizers.....	5	1,282	5,458,905	12,863,425	25,854,659	41,037,355
10 Shipbuilding.....	24	3,664	14,250,207	10,065,511	24,066,422	34,452,724
11 Butter and cheese.....	30	1,943	6,402,030	20,539,468	9,343,185	30,877,088
12 Fruit and vegetable preparations.....	68	2,300	5,005,096	19,514,743	11,994,349	29,469,134
13 Printing and publishing.....	91	3,107	11,731,004	6,478,251	20,357,648	27,051,083
14 Bread and other bakery products.....	282	2,868	8,274,354	11,440,544	12,692,703	24,904,461
15 Sheet metal products.....	30	963	3,710,602	11,724,091	8,208,770	19,870,960
16 Bridge and structural steel work.....	4	1,342	5,593,685	11,213,127	8,288,781	19,747,383
17 Machinery, industrial.....	42	1,690	6,567,786	6,068,134	13,112,542	19,037,735
18 Furniture.....	218	1,970	5,712,157	8,815,112	8,518,311	17,512,239
19 Boxes and bags, paper.....	17	1,022	3,143,451	10,380,756	6,689,737	17,143,428
20 Feeds, stock and poultry, prepared.....	38	771	2,311,444	11,894,635	3,531,964	16,235,334
21 Breweries.....	9	652	2,499,295	3,272,750	11,967,311	15,412,921
22 Miscellaneous paper goods.....	13	696	2,151,537	9,125,735	4,563,093	13,751,656
Totals, Leading Industries.....	3,119	78,194	271,529,970	697,992,538	592,236,623	1,313,506,592
Totals, All Industries.....	4,486	102,408	353,810,727	895,973,668	750,877,508	1,679,344,816

¹ Other leading industries for which statistics cannot be shown since there are fewer than three establishments in each industry are non-ferrous metal smelting and refining, sugar refining, and distilled liquors.

Section 2.—Manufacturing Industries in Urban Centres

The prosperity of most of the cities and towns of Canada, especially in Eastern Canada, is intimately connected with their manufacturing industries, which provide employment for a large proportion of the labour forces. In Western Canada the cities are largely distributing centres, though manufacturing is increasing rapidly there also.

Table 8 indicates the extent to which the manufacturing industries are concentrated in urban centres and shows, by province, the proportion of the value of factory shipments contributed by cities and towns having shipments of over \$1,000,000 each. In the more highly industrialized provinces of Ontario and Quebec such cities and towns accounted for 79 p.c. and 93 p.c. respectively of the total manufactures of those provinces in 1955, while in the Atlantic Provinces and British Columbia, where sawmilling, fish packing and dairying are leading industries, the proportions were 64 p.c. and 54 p.c. respectively. In the Prairie Provinces, manufacturing is confined largely to a few urban centres.

Comparing 1955 figures with those of 1954, a noticeable trend towards the decentralization of industry is apparent in all provinces but the most striking change is shown by Ontario where there has recently been a tendency to establish new industry in smaller urban centres and where many new one-industry areas have been opened up. In that Province the percentage of manufactures accounted for by urban centres having shipments of over \$1,000,000 was 90 in 1952 but dropped to 79 by 1955.

8.—Urban Centres each with Selling Value of Factory Shipments of Over \$1,000,000, Number of Establishments and Total Shipments in these Centres as a Percentage of the Provincial Total, by Province 1954 and 1955.

NOTE.—Statistics published in this table are sometimes higher than the figures published in Table 11, pp. 697-699, since the table below includes statistics of towns with fewer than three establishments and production of over \$1,000,000 each. It is not possible to publish this information in Table 11 without disclosing the operations of individual establishments.

Year and Province or Territory	Urban Centres with Value of Factory Shipments of over \$1,000,000 each	Establish- ments Reporting in Urban Centres with Value of Factory Shipments of over \$1,000,000	Value of Factory Shipments of Urban Centres having \$1,000,000 or over	Value of Factory Shipments of each Province	Value of Factory Shipments of Urban Centres as a Percentage of Shipments in each Province
	No.	No.	\$	\$	
1954					
Newfoundland.....	4	126	73,690,698	109,567,770	67.3
Prince Edward Island.....	3	61	15,973,456	23,469,743	68.1
Nova Scotia.....	27	528	203,774,207	300,072,733	67.9
New Brunswick.....	18	361	228,531,168	287,350,600	79.5
Quebec.....	163	8,078	5,027,556,543	5,395,786,644	93.2
Ontario.....	182	9,638	7,505,904,263	8,533,167,214	88.0
Manitoba.....	10	1,064	481,425,498	571,408,772	84.3
Saskatchewan.....	8	382	222,530,692	280,733,784	79.3
Alberta.....	16	941	412,586,436	575,277,702	71.7
British Columbia.....	41	2,690	873,369,110	1,474,156,242	59.2
Yukon and Northwest Territories..	—	—	—	3,536,300	—
Canada, 1954.....	472	23,869	15,045,342,071	17,554,527,504	85.8
1955					
Newfoundland.....	5	133	75,356,756	115,579,036	65.2
Prince Edward Island.....	2	42	11,965,164	23,628,831	50.6
Nova Scotia.....	27	540	218,303,765	331,129,690	65.9
New Brunswick.....	16	341	221,894,460	294,829,050	75.3
Quebec.....	175	8,210	5,508,352,309	5,922,367,074	93.0
Ontario.....	180	9,248	7,550,499,731	9,617,642,961	78.5
Manitoba.....	13	1,128	488,164,813	588,351,081	83.0
Saskatchewan.....	9	422	232,483,059	295,162,037	78.8
Alberta.....	17	1,016	426,500,348	641,148,235	66.5
British Columbia.....	36	2,455	911,907,151	1,679,344,816	54.3
Yukon and Northwest Territories..	—	—	—	4,751,000	—
Canada, 1955.....	480	23,535	15,645,427,556	19,513,933,811	80.2

9.—Principal Statistics of the Manufacturing Industries of the Six Leading Manufacturing Cities 1939-55

City and Year	Estab- lish- ments	Em- ployees	Earnings	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products ¹
	No.	No.	\$	\$	\$	\$
Montreal, Que. 1939	2,501	105,315	114,602,118	7,667,848	254,188,246	483,246,583
1946	3,785	173,507	291,381,617	14,740,538	602,667,823	1,147,945,303
1949	4,136	184,779	399,943,526	16,487,474	847,444,669	1,596,713,694
1953	4,398	193,129	544,284,191	18,428,249	1,067,911,378	2,042,662,785
1954	4,415	184,684	539,119,575	19,030,786	1,050,160,663	1,987,217,589
1955	4,379	176,998	529,339,811	19,553,134	1,021,717,306	1,963,367,235

For footnote, see end of table, p. 696.

9.—Principal Statistics of the Manufacturing Industries of the Six Leading Manufacturing Cities 1939-55—concluded

City and Year	Estab- lish- ments	Em- ployees	Earnings	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products ¹
	No.	No.	\$	\$	\$	\$
Toronto, Ont. 1939	2,885	98,702	122,553,435	7,306,351	240,532,281	482,532,331
1946	3,632	145,556	247,298,288	12,238,707	549,256,912	1,036,939,790
1949	4,005	158,562	368,510,524	17,003,151	837,148,440	1,579,186,450
1953	3,781	154,251	478,086,271	18,968,416	980,873,073	1,875,747,249
1954	3,728	145,792	470,046,860	19,883,670	945,614,031	1,810,860,959
1955	3,497	134,235	448,775,761	18,788,747	916,493,539	1,732,099,123
Hamilton, Ont. 1939	461	31,512	39,563,423	5,267,577	70,829,034	152,746,340
1946	501	45,951	80,959,432	10,434,888	150,977,835	308,033,098
1949	546	54,665	137,641,333	17,728,214	285,180,403	563,982,920
1953	566	60,451	201,515,979	22,408,131	385,515,852	824,407,315
1954	580	54,199	189,099,943	20,470,777	341,555,746	752,353,730
1955	588	55,202	200,311,361	24,807,502	395,047,070	844,835,085
Windsor, Ont. 1939	222	17,729	25,938,890	1,673,417	63,907,106	122,474,320
1946	256	30,889	60,315,436	3,748,979	138,788,813	244,925,148
1949	283	34,591	94,304,627	5,373,123	271,392,923	494,162,203
1953	338	37,514	140,481,193	7,559,592	402,209,586	682,273,319
1954	353	30,210	112,816,841	5,718,287	263,143,564	474,634,211
1955	334	25,654	101,810,378	4,975,650	186,275,443	374,512,418
Winnipeg, Man. 1939	648	17,571	20,717,273	1,491,823	44,873,043	81,024,272
1946	756	26,730	42,354,650	2,625,075	121,531,306	206,381,007
1949	860	28,687	58,604,162	3,166,077	143,827,270	255,006,806
1953	860	28,230	76,008,218	3,266,587	156,860,845	300,186,774
1954	864	26,887	74,628,593	3,503,403	150,352,336	288,602,394
1955	873	26,392	75,281,647	3,541,450	152,575,494	291,084,611
Vancouver, B.C. 1939	829	17,957	22,382,192	1,397,159	56,565,511	101,267,243
1946	1,071	31,408	55,900,984	3,075,458	138,045,068	270,165,166
1949	1,225	33,536	78,793,345	4,392,716	204,642,985	358,620,526
1953	1,316	33,822	108,896,725	5,448,266	255,906,780	448,591,543
1954	1,335	33,916	114,114,199	6,104,757	273,058,336	486,913,181
1955	1,330	34,683	120,488,180	5,757,268	276,666,483	489,181,449

¹ Net value is derived from gross value by deducting cost of materials, fuel and electricity. In 1952 gross value of products was replaced by value of factory shipments; see text, p. 634.

10.—Principal Statistics of the Manufacturing Industries in the Six Leading Metropolitan Areas 1954 and 1955

Metropolitan Area	Estab- lish- ments	Em- ployees	Earnings	Cost of Fuel and Electricity	Cost at Plant of Materials Used	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
1954						
Montreal.	5,050	239,811	727,701,073	44,572,601	1,645,598,508	3,056,372,991
Toronto.	4,667	200,716	657,337,207	30,072,161	1,288,506,914	2,546,283,395
Hamilton.	679	57,071	197,158,253	21,075,453	358,290,238	783,690,490
Windsor.	381	30,969	115,076,288	5,877,855	268,484,610	484,157,007
Winnipeg.	1,005	35,753	101,376,436	6,341,804	288,990,475	489,227,873
Vancouver.	1,729	50,129	169,444,676	10,142,842	411,308,194	750,277,091
1955						
Montreal.	5,147	240,288	750,385,954	47,051,284	1,808,114,819	3,331,614,743
Toronto.	4,685	200,352	679,096,497	30,413,613	1,382,513,942	2,716,050,767
Hamilton.	700	58,337	209,520,995	25,540,191	415,146,966	882,681,084
Windsor.	387	36,528	144,637,822	7,787,681	338,435,101	617,299,358
Winnipeg.	1,038	35,898	106,439,189	8,035,778	286,929,227	497,254,934
Vancouver.	1,762	53,112	185,614,937	10,983,013	458,559,366	830,019,379

11.—Statistics of Manufactures of Municipalities, each with Factory Shipments of \$5,000,000 or Over and with Three or More Establishments 1955

NOTE.—Statistics for urban centres with three or more establishments cannot be published when one establishment has 75 p.c. or two establishments 90 p.c. of the total value of shipments. Comparable figures for 1954 have not been published in the Canada Year Book but are available from DBS publication *General Review of the Manufacturing Industries of Canada 1954*.

Province and Municipality	Estab- lish- ments	Em- ployees	Earnings	Cost of Fuel and Electricity	Cost at Plant of Materials Used	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Newfoundland—						
St. John's.....	104	2,228	5,777,609	531,462	10,882,053	24,230,079
Prince Edward Island—						
Charlottetown.....	34	646	1,547,246	166,956	6,942,079	10,302,264
Nova Scotia—						
Amherst.....	24	1,248	3,182,627	289,572	4,691,360	10,802,773
Halifax.....	149	6,260	17,195,401	1,036,567	30,415,702	63,779,266
Lunenburg.....	17	703	1,695,748	103,960	3,968,136	6,998,037
New Glasgow.....	28	721	1,898,985	335,141	3,180,786	6,471,992
Sydney.....	42	5,010	17,881,991	3,312,098	30,144,108	62,517,550
Trenton.....	8	946	2,918,040	436,453	8,116,485	13,319,878
Truro.....	43	943	1,777,778	165,008	4,025,106	7,608,240
Yarmouth.....	30	690	1,379,583	136,046	3,718,080	6,556,728
New Brunswick—						
Fredericton.....	39	886	1,908,823	148,692	3,780,802	7,379,607
Lancaster.....	8	508	1,388,570	91,111	2,706,489	7,557,100
Moncton.....	50	2,771	8,047,771	597,951	19,601,426	32,539,153
Saint John.....	108	4,528	11,599,173	1,399,859	43,909,577	70,108,559
Quebec—						
Acton Vale.....	15	945	2,099,570	69,808	3,779,259	6,758,939
Beauharnois.....	18	1,459	4,999,388	3,711,636	12,095,633	28,432,750
Berthierville.....	15	654	1,441,975	156,933	2,561,787	5,828,677
Cap de la Madeleine.....	36	2,299	6,545,949	1,599,201	23,403,049	43,808,043
Chicoutimi.....	35	537	1,318,630	110,183	2,702,609	5,268,969
Coaticook.....	22	1,093	2,415,974	137,486	6,040,135	9,729,163
Côte-St-Luc.....	4	977	3,662,857	150,714	9,149,700	16,646,509
Cowansville.....	11	1,585	4,365,907	344,475	8,622,966	16,116,904
Donnacoona.....	5	983	4,167,472	2,014,471	7,098,163	18,452,934
Drummondville.....	57	6,193	16,612,065	1,337,956	31,398,691	64,385,410
Farnham.....	19	1,061	2,548,018	176,257	4,596,436	9,601,624
Granby.....	87	5,793	15,116,410	894,430	28,954,751	62,238,236
Grand Mère.....	34	2,453	6,942,083	1,648,906	13,698,225	31,631,623
Hull.....	52	3,690	11,821,298	2,299,978	30,420,025	59,042,070
Huntingdon.....	13	585	1,671,567	175,749	7,547,829	10,778,759
Joliette.....	61	2,227	5,312,944	600,459	8,912,651	19,747,489
Jonquière.....	21	502	1,534,915	269,775	3,816,940	6,998,161
Lachine.....	76	11,709	43,104,952	1,720,809	73,741,651	154,785,071
Lasalle.....	50	5,405	18,600,726	3,048,066	57,266,271	110,279,004
L'Assomption.....	15	614	1,473,464	111,432	3,156,971	5,645,750
Longueuil.....	35	1,825	4,509,130	235,517	7,500,185	15,718,448
Louiseville.....	19	1,689	3,915,512	387,342	6,336,127	12,121,743
Magog.....	31	2,652	6,880,485	814,386	34,329,365	44,980,774
Marieville.....	21	595	1,281,664	110,585	4,246,937	6,559,701
Montmagny.....	40	4,451	3,407,554	212,435	6,638,090	13,333,750
Montreal.....	4,379	176,998	529,339,811	19,553,134	1,021,717,306	1,963,367,235
Montreal East.....	37	6,200	24,539,091	16,071,898	426,709,916	608,723,373
Mount Royal.....	37	5,586	19,294,150	704,782	54,928,338	95,336,816
Notre-Dame-de-Portneuf.....	17	575	1,605,350	356,752	4,726,097	8,231,436
Outremont.....	73	3,235	8,902,414	307,450	26,516,761	49,068,616
Plessisville.....	28	1,131	2,231,976	112,034	3,458,279	7,049,624
Pont Rouge.....	13	311	895,702	288,393	3,128,264	6,323,058
Princeville.....	15	558	1,255,218	94,560	6,353,690	8,876,386
Quebec.....	428	16,318	43,544,693	5,949,934	92,033,607	193,753,782
St. Hyacinthe.....	81	3,947	9,127,338	624,442	24,453,481	39,820,831
St. Jean (St. Johns).....	75	4,986	14,700,536	1,059,838	25,151,715	55,832,109
St. Jérôme (Terrebonne Co.).....	57	3,559	8,765,152	610,530	15,338,942	30,670,193
St. Joseph-de-Sorel.....	13	1,758	6,511,778	321,889	1,796,502	12,070,606
St. Lambert.....	23	892	2,433,160	104,043	4,421,194	8,842,288
St. Laurent.....	70	14,434	53,991,677	1,754,971	58,455,872	159,926,328
St. Marie.....	18	758	1,711,239	72,235	4,357,937	8,414,179
St. Michel (de-Laval).....	72	938	2,530,194	221,116	4,439,975	9,150,317
St. Pierre.....	18	1,311	4,465,189	733,362	5,190,031	18,916,444
St. Rémi.....	12	360	832,409	55,150	3,594,144	5,246,103
St. Thérèse de Blainville.....	38	1,102	2,384,470	142,657	4,300,887	9,751,885
Shawinigan Falls.....	46	5,834	21,337,823	9,834,841	49,519,197	124,763,014

11.—Statistics of Manufactures of Municipalities, each with Factory Shipments of \$5,000,000 or Over and with Three or More Establishments 1955—continued

Province and Municipality	Estab- lish- ments	Em- ployees	Earnings	Cost of Fuel and Electricity	Cost at Plant of Materials Used	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Quebec—concluded						
Sherbrooke.....	114	7,679	19,562,779	1,269,654	43,179,925	82,349,900
Sorel.....	38	1,632	4,831,110	2,647,519	5,520,918	14,241,131
Terrebonne.....	19	659	1,728,795	96,293	2,802,217	6,076,542
Three Rivers.....	90	7,808	24,523,464	7,654,535	51,821,172	120,016,513
Valleyfield.....	38	3,437	9,926,814	787,166	19,637,754	35,780,883
Verdun.....	75	1,754	4,410,455	142,866	9,428,391	17,233,306
Victoriaville.....	58	2,765	5,990,078	228,832	11,594,186	21,694,897
Waterloo.....	21	612	1,565,660	97,018	2,929,341	5,505,800
Westmount.....	38	1,999	6,276,396	384,407	6,334,850	17,556,704
Windsor.....	14	1,698	5,801,138	1,108,123	11,175,632	23,683,306
Ontario—						
Acton.....	19	928	2,554,388	287,028	6,518,685	11,621,230
Amherstburg.....	13	660	2,106,028	574,346	3,209,480	10,808,089
Amrior.....	18	934	2,608,890	155,504	3,588,552	8,587,286
Aurora.....	18	762	1,985,778	85,716	4,767,171	8,129,326
Aylmer.....	15	490	1,172,278	145,104	22,360,599	25,651,839
Barrie.....	35	1,360	3,879,686	238,489	11,152,781	21,414,726
Belleville.....	65	3,045	9,834,029	2,158,781	12,998,023	36,178,741
Bowmanville.....	20	942	3,053,131	187,581	5,569,848	13,260,972
Brampton.....	35	1,337	3,994,815	278,083	6,541,272	14,295,405
Brantford.....	165	10,891	34,763,943	1,823,189	67,064,842	127,623,951
Brookville.....	48	2,416	7,672,178	535,570	46,609,547	62,600,847
Burlington.....	21	792	2,298,651	110,449	6,408,215	9,840,522
Chatham.....	78	3,727	12,685,461	1,012,448	69,424,438	93,794,028
Cobourg.....	29	1,063	3,449,954	198,516	5,444,642	11,701,933
Collingwood.....	23	825	2,385,247	120,918	4,075,147	7,480,215
Cornwall.....	47	4,540	13,600,185	2,448,918	21,708,059	48,525,331
Delhi.....	15	427	1,080,074	69,500	15,457,173	17,752,367
Dundas.....	36	1,194	3,817,274	334,623	4,659,010	10,728,010
Dunnville.....	22	1,284	3,070,883	174,547	10,350,634	15,348,169
Eastview.....	24	436	1,450,794	106,114	5,462,113	7,891,227
Elmira.....	22	544	1,630,918	184,270	5,052,369	9,262,871
Fort Erie.....	25	661	2,398,473	75,733	6,496,062	12,372,472
Fort William.....	65	3,886	13,521,640	3,308,674	24,501,312	57,009,049
Galt.....	96	6,357	18,888,679	834,814	33,649,114	64,879,912
Gananoque.....	19	849	2,654,415	215,021	4,203,209	8,842,825
Georgetown.....	17	1,286	4,132,307	242,785	7,551,968	13,782,498
Goderich.....	18	539	1,490,498	190,881	2,961,945	6,435,248
Guelph.....	116	6,267	20,017,561	1,226,218	37,594,676	73,025,706
Hamilton.....	588	55,202	200,311,361	24,807,502	395,047,070	844,835,085
Hanover.....	22	795	2,307,962	123,533	3,496,239	6,758,820
Hespeler.....	18	1,590	4,265,703	471,055	6,639,941	14,594,596
Ingersoll.....	22	1,118	3,293,330	213,203	8,824,479	15,371,987
Kingston.....	73	6,310	21,405,984	1,621,987	53,672,041	102,807,120
Kitchener.....	204	14,635	46,600,436	2,196,936	101,562,112	208,062,376
Leamington.....	22	1,353	4,146,819	368,114	13,913,589	25,888,845
Leaside.....	50	7,612	26,825,121	1,115,661	61,958,650	122,363,939
Lindsay.....	35	1,441	3,752,037	338,764	6,303,276	12,688,154
London.....	295	15,622	48,977,683	2,421,321	93,864,905	198,567,936
Long Branch.....	26	1,435	5,071,859	240,322	9,081,479	18,561,042
Merriton.....	19	2,141	8,592,767	1,264,404	16,677,045	32,555,737
Midland.....	23	951	2,230,108	113,382	6,948,465	10,764,256
Milton.....	16	1,082	3,884,242	517,461	5,477,452	12,931,662
Mimico.....	44	937	2,942,114	119,128	4,883,528	10,801,854
New Liskeard.....	14	688	1,948,199	87,122	4,009,423	7,227,047
Newmarket.....	24	923	2,793,362	152,664	5,047,392	11,507,189
New Toronto.....	40	7,024	28,500,789	1,959,545	97,947,853	187,316,070
Niagara Falls.....	82	5,539	19,310,803	5,933,601	38,620,550	96,645,017
North Bay.....	28	505	1,528,885	134,572	2,420,478	5,316,972
Oakville.....	51	1,455	4,523,635	287,424	7,337,724	17,643,933
Orillia.....	57	2,160	6,199,414	435,393	6,602,034	17,951,553
Ottawa.....	310	10,302	31,303,781	2,044,869	48,114,791	108,318,828
Owen Sound.....	49	2,636	7,759,584	315,468	8,907,743	23,739,906
Paris.....	23	1,380	4,032,254	166,446	7,151,557	12,214,752
Pembroke.....	32	1,503	3,711,982	180,458	6,723,081	13,242,592
Perth.....	26	914	2,075,919	111,063	5,161,872	9,946,058
Peterborough.....	95	9,662	33,929,742	1,266,030	64,899,737	117,597,499
Port Arthur.....	61	2,421	9,020,507	2,225,524	16,669,625	41,653,720
Port Hope.....	26	1,326	4,817,207	363,327	20,895,683	33,113,040
Preston.....	40	2,605	7,398,836	295,755	8,906,067	20,691,013
Renfrew.....	28	660	1,781,397	135,288	2,767,811	5,685,716
St. Catharines.....	101	5,536	19,260,531	929,319	24,914,488	55,560,225

11.—Statistics of Manufactures of Municipalities, each with Factory Shipments of \$5,000,000 or Over and with Three or More Establishments 1955—concluded

Province and Municipality	Estab- lish- ments	Em- ployees	Earnings	Cost of Fuel and Electricity	Cost at Plant of Materials Used	Selling Value of Factory Shipments
	No.	No.	\$	\$	\$	\$
Ontario—concluded						
St. Mary's.....	13	542	1,635,887	1,400,969	4,986,137	12,575,632
St. Thomas.....	48	2,003	6,278,789	368,407	10,697,273	23,798,778
Sarnia.....	52	7,003	28,562,579	14,430,168	155,908,558	309,416,107
Sault Ste. Marie.....	55	8,417	35,623,678	7,726,855	67,890,472	139,608,783
Simcoe.....	33	1,376	4,274,385	270,204	27,653,388	39,144,258
Smith's Falls.....	26	706	1,946,752	135,893	3,292,768	7,521,596
Stratford.....	68	3,485	10,335,997	418,313	19,875,237	36,788,120
Streetsville.....	15	557	1,654,832	178,075	5,197,890	8,591,816
Sudbury.....	62	1,090	3,268,209	343,881	6,071,511	13,083,215
Swansea.....	19	900	2,969,829	272,055	5,854,023	12,314,905
Thorold.....	26	2,746	11,737,822	3,374,104	23,323,616	49,567,223
Tilbury.....	10	695	2,394,395	130,017	1,635,986	6,217,146
Tilsonburg.....	27	981	2,533,336	243,964	12,959,021	18,684,883
Toronto.....	3,497	134,235	448,775,761	18,788,747	916,493,539	1,732,099,123
Trenton.....	33	1,564	4,422,701	533,039	9,057,062	19,721,806
Wallaceburg.....	28	2,129	7,221,255	870,684	7,201,674	19,516,875
Waterloo.....	64	3,017	9,216,442	480,726	14,368,957	45,425,005
Welland.....	55	4,342	15,056,222	2,656,144	23,084,524	55,377,848
Whitby.....	15	596	1,716,312	116,786	2,604,224	6,934,853
Windsor.....	334	25,654	101,810,378	4,975,650	186,275,443	374,512,297
Woodbridge.....	11	382	1,155,908	156,020	3,569,357	5,538,297
Woodstock.....	64	4,156	12,780,076	578,435	29,689,791	52,789,171
Manitoba—						
Brandon.....	41	837	2,481,112	308,226	9,650,068	16,245,505
Flin Flon.....	9	259	1,017,172	446,970	6,252,995	15,931,625
St. Boniface.....	96	4,581	15,433,362	1,412,356	93,129,678	125,244,146
Selkirk.....	10	901	3,243,015	598,971	3,717,319	11,018,823
Transcona.....	8	1,965	6,419,729	332,584	9,523,714	18,252,548
Winnipeg.....	873	26,392	75,281,647	3,541,450	152,575,494	291,084,611
Saskatchewan—						
Moose Jaw.....	48	1,296	4,079,553	1,120,318	33,207,027	48,569,981
Prince Albert.....	38	923	2,756,220	231,457	10,121,765	17,163,062
Regina.....	147	3,305	11,289,862	2,497,834	47,415,418	86,122,120
Saskatoon.....	121	2,966	9,338,487	1,101,752	47,723,596	70,671,208
Alberta—						
Calgary.....	340	9,204	29,678,611	1,584,888	96,953,715	158,287,364
Edmonton.....	384	11,363	35,067,962	1,497,932	113,943,494	185,379,126
Lethbridge.....	63	1,149	3,224,366	235,027	7,750,020	15,832,379
Medicine Hat.....	41	944	2,344,822	144,923	13,257,656	18,910,072
Red Deer.....	23	280	796,793	70,802	2,877,235	5,014,937
British Columbia—						
Kamloops.....	34	509	1,597,419	329,809	4,518,350	8,438,042
Kelowna.....	38	824	2,322,374	126,435	4,287,962	8,563,086
Nanaimo.....	26	523	1,829,859	129,715	3,763,117	7,419,227
New Westminster.....	130	8,116	28,504,965	1,608,110	73,673,674	137,527,166
North Vancouver.....	64	2,507	9,125,641	466,105	14,429,949	33,756,046
Port Alberni.....	19	2,827	10,061,827	435,455	24,695,111	44,721,166
Prince George.....	85	1,028	2,905,048	280,425	11,771,961	17,626,651
Quesnel.....	85	806	2,207,103	175,992	5,188,041	10,098,555
Vancouver.....	1,330	34,683	120,488,180	5,757,268	276,666,483	489,181,449
Victoria.....	201	4,839	16,812,711	929,842	28,726,427	61,375,045
William's Lake.....	45	315	879,615	93,249	3,752,926	5,946,728

CHAPTER XVI.—CAPITAL EXPENDITURES, CONSTRUCTION AND HOUSING

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

This Chapter provides data on the capital expenditures made by all sectors of the Canadian economy on construction and on machinery and equipment together with summaries of other available statistics for the construction industry. Section 1 describes the purpose of capital expenditures and shows the amounts spent by each of the various industrial or economic sectors. Section 2 brings together a number of summaries of related series on construction activity: value of work performed by type of structure, value of materials used, salaries and wages paid and numbers employed, contracts awarded and building permits issued. Construction of dwelling units and government aid to house building is covered in Section 3.

Section 1.—Capital Expenditures on Construction and on Machinery and Equipment*

Capital expenditures made by business, institutions, governments and individuals form one of the most important determinants of the economic growth of the country, as well as being one of the principal factors affecting the level of economic activity within the nation at any given time. Capital expenditures for new physical assets create jobs for many people who provide the materials and labour required in the erection of new structures and in the manufacture of new machinery and equipment. In addition, they have the long-term effect of improving and expanding the productive facilities of the country. In the past, the volume of capital investment has been one of the most dynamic factors affecting the level of employment and income.

Since the end of World War II, capital investment in Canada has been increasing rapidly each year, with the one exception of 1954 when expenditures declined 4.8 p.c. from the previous year. In this period expenditures on new construction and for the purchase of new machinery and equipment totalled over \$50,000,000,000 and ranged from \$1,703,000,000 in 1946 to \$7,900,000,000 in 1956. In 1956 private capital investment was at an all-time high in Canada and accounted for 22 p.c. of the gross national product; when account is taken of similar expenditures by government, the proportion rises to well over 26 p.c. Thus approximately one-quarter of the national product is being directed to expanding and diversifying Canada's economy, a rate of investment in capital assets higher than that recorded by any other industrialized private-enterprise society.

* Information is given in greater detail in the Department of Trade and Commerce annual report, *Private and Public Investment in Canada*.

1.—Capital Expenditures on Construction and on Machinery and Equipment 1928-57

NOTE.—Actual expenditures 1928-55; preliminary actual 1956; intentions 1957.

Year	Capital Expenditures	P.C. of Gross National Product	Year	Capital Expenditures	P.C. of Gross National Product
	\$'000,000			\$'000,000	
1928.....	1,296	21.2	1943.....	1,485	13.3
1929.....	1,518	24.6	1944.....	1,309	11.0
1930.....	1,287	23.2	1945.....	1,284	10.8
1931.....	881	19.3	1946.....	1,703	14.2
1932.....	491	13.0	1947.....	2,489	18.1
1933.....	327	9.2	1948.....	3,175	20.3
1934.....	416	10.3	1949 ¹	3,502	21.3
1935.....	505	11.6	1950.....	3,815	21.0
1936.....	590	12.6	1951.....	4,577	21.3
1937.....	828	15.5	1952.....	5,285	22.7
1938.....	773	14.8	1953.....	5,841	23.9
1939.....	765	13.4	1954.....	5,620	23.3
1940.....	1,048	15.3	1955.....	6,350	23.7
1941.....	1,463	17.2	1956.....	7,900	26.6
1942.....	1,542	14.6	1957.....	8,533	27.5

¹ Newfoundland included from 1949.

Maintenance of such a high rate of expansion and its accompanying improvement in the standard of living has been accomplished only because a substantial part of the investment funds have come from outside the country. This inflow of funds has been mainly from the United States, although considerable sums of money have also come from the United Kingdom and other countries which look upon Canada as a favourable investment field.

The expansion of capital investment in the postwar period has passed through three main phases. In the first years of that period, accumulated demand at home and abroad provided the stimulus for rapid expansion in capital outlays, with emphasis on consumer goods, agriculture and housing. The second phase was initiated after the outbreak of war in Korea in mid-1950 which created new demands on the economy, shifting the emphasis in the investment program towards defence and defence-supporting activities. The third phase followed the short-lived North American recession of 1953-54 and was related to the high and rising levels of activity in Canada's principal foreign markets. The strength of foreign demand encouraged heavy capital outlays in traditional export industries. Two persistent influences underlying the expansion of investment during the postwar period may be identified—a world environment that favoured the development of new and known resources, and a rapid growth and redistribution of population that created a need for additional social capital of all kinds. The strength of expansionary forces is demonstrated by the fact that capital outlays as a percentage of current dollar gross national product rose from 14.2 in 1946 to 26.6 in 1956. The extensive development of Canada's mineral, forest and water power resources contributed substantially to this trend.

The interplay of forces making for an expansion in capital outlays is particularly evident in the utilities sector. It became clear shortly after the War ended that the facilities in this field were inadequate to support the level of activity to which the economy was moving. Subsequently, the discovery of new resources, of which oil is the conspicuous example, and the expansion of such industries as non-ferrous metals and pulp and paper required heavy capital outlays on the related utilities. As a result, the utilities absorbed a greater share of the total program in the past six years than in the earlier postwar years.

The capital outlays of central electric stations, which form the largest single group in the utility field, ranged as high as 48 p.c. of the total for the group in 1951 and 1952, continued to advance until 1953 and 1954 when major projects were near completion, and in 1956 accounted for 36 p.c. of the group total. The growth of central electric stations

in the period is indicated by the substantial increase in electric power generated and by the new capacity that will become available by 1960. The nation's output of 43,425,000,000 kwh. in 1947 advanced to 78,004,000,000 kwh. in 1956 and will reach an estimated 110,000,000,000 kwh. by 1960.

Capital outlays by the railways have fluctuated considerably, but during the period they added to motive power and rolling-stock, constructed additional yard and siding track and extensions serving industrial sites, and built new lines to link newly developing areas with established settlements.

The commencement of work on the St. Lawrence Seaway late in 1954 involved a rapid growth of capital expenditures on water transport, while construction of pipelines for the transmission of oil and gas made this the most rapidly growing element in the utilities program. Expansion of outlays in the communications industry has been more continuous than in the other major utilities although the level of expenditures anticipated in 1957 involves a rate of increase substantially higher than in most postwar years.

A notable feature of postwar capital expenditure in manufacturing was the relatively small increase in outlays in the consumer soft-goods industries (foods and beverages, tobacco, rubber, leather, textiles, clothing, and printing and publishing). These industries in the first postwar years accounted for about 30 p.c. of all capital outlays in manufacturing but by 1956 the proportion had fallen to 15 p.c., the same percentage as in 1952 when the Korean war was influencing the pattern of expansion.

Heavy manufacturing industries have been expanding since the end of the War under varied influences. The iron and steel industry advanced sharply in 1952 to supply war materials for the Korean conflict, and again during 1956 and 1957 in line with the general expansion in the investment program. This latter influence also had a substantial effect on investment for primary cement production during 1956. Pulp and paper, Canada's largest manufactured export industry, grew steadily until 1953, in which year most firms were consolidating their rapid postwar growth. However, a second round of pulp and paper expansion commenced in 1955, indicating continued confidence in the export market for these products. Important developments have taken place in petroleum refineries in the Sarnia area of Ontario following the construction of the Interprovincial pipeline, and in the Vancouver area of British Columbia at the terminal of the Trans Mountain oil pipeline. A further development of considerable importance to the Canadian economy in recent years has been the development of a petrochemical industry based on the new discoveries of large amounts of oil and gas in the Prairie Provinces. The automobile industry's major rebuilding in 1953 and establishment of the chemical industry's synthetic plants in that period increased substantially the importance of these industries among Canada's manufactures.

The growth and redistribution of Canada's population has required substantial increases in capital expenditures in the trade, financial and commercial sectors of the economy, ranging from \$137,000,000 in 1946 to an estimated \$607,000,000 in 1956. Although, as a proportion of the total program, expenditures in these sectors have remained relatively stable, there has been a tendency for such expenditures to form a larger portion of the total at a time when investment in commodity-producing industries was slowing down. For example, in 1950 and in 1954 when some other sectors showed declines these groups accounted for 10.3 p.c. of the total program, whereas in 1956 when the general economy rose the proportion was only 7.7 p.c. The pattern of expenditures for institutional services—schools, hospitals, churches, etc.—was similar during the period, with the highest proportions of 6.0 and 6.4 p.c. in 1954 and 1955 respectively.

Capital expenditures by government departments have remained relatively constant as a proportion of the total except for 1952 when outlays for defence purposes rose sharply.

Investment in housing was at a high level and represented from 21 to 25 p.c. of the total investment program in the period 1946 to 1950. These high rates of building reflected accumulated needs backed by accumulated savings, a high rate of family formation, and favourable terms of financing. With the firming of interest rates in 1951, and renewed

scarcities of labour and materials, investment in housing declined in 1951 and 1952. New legislation in 1954, which broadened the mortgage market, strongly reinforced the upward trend in house-building activity that had begun in 1953. During 1956, difficulties in financing again began to have a restraining effect on house-building activity and the shortage of serviced land in some localities was a further complicating factor.

The development of Canada's natural resources has led to substantial investment in related industries as is evidenced by a brief examination of the effect of petroleum and natural gas output in Canada.

In the early postwar years, Canada's supply of petroleum was sufficient to meet only a very small part of the demand and most of the available supply was located far from the major markets. To help meet growing demand, refineries were built during 1947 and 1948 in the Montreal area of Quebec based on the use of imported crude oil. However from 1947, when the first major discoveries of new oil fields in Western Canada were made, the whole nature of the industry in Canada changed rapidly. Production of crude oil which in 1946 amounted to 7,600,000 bbl. advanced to 172,000,000 bbl. in 1956. To utilize these newly discovered resources, pipelines were laid from the Prairie Provinces to Central Canada and to the Pacific Coast. New refineries were built at Sarnia in Ontario and later in the Toronto area and in the Vancouver area of British Columbia as well as in the Prairie Provinces. Oil companies operating with increased refinery capacity found that although the market for gasoline products was expanding it was also becoming more competitive. To improve their position in the market, major oil companies launched a service station modernization and expansion program in 1952. Increased production of crude oil and natural gas also provided the base for a rapid rise of the petrochemical industry in Canada.

Although the construction of oil pipelines followed fairly closely the development of oil fields in the Prairie Provinces, it was not until the latter part of 1955 that gas trunk-pipeline construction was undertaken. The first of these was a line from the Peace River area through the mountains to the United States border and Vancouver. In 1956 a pipeline to bring natural gas from the Prairie Provinces to Eastern Canada was started.

Capital expenditures made directly in the petroleum and natural gas industry have increased very substantially in every phase of operations—development, refining, transporting and distributing. Total capital expenditures in 1946 were \$20,000,000 as compared with an estimated \$821,000,000 in 1957. This very large expansion has also generated large capital expenditures in such industries as iron and steel to supply steel pipe for the pipelines, in the utilities which distribute natural gas to the consumer when the pipelines reach the more populated areas, and in the chemical industry which uses petroleum products as raw materials.

As further evidence of major resource development in mining, the uranium and iron ore industries are outstanding examples. Development of uranium mining has been so rapid during the past few years that it may soon rank first in value of production of all metal mining. During World War II small-scale development was undertaken at Great Bear Lake by the Government followed by larger operations at Beaverlodge Lake in northern Saskatchewan. However, the Blind River area of Ontario is now the major source of supply. As for iron ore, the development of the Quebec-Labrador area has been most prominent, involving construction of a railway running 360 miles north from the St. Lawrence, a new townsite at Schefferville, dock facilities and the changing of a small village into a substantial shipping port at Sept-Îles, and hydro-electric developments close to the mining and dock areas. Large-scale expansion has also taken place in the Steep Rock area of northwestern Ontario. These developments have increased the importance of iron ore to the point where, in 1956, it occupied fourth place among the minerals of Canada, following oil, copper and nickel.

The growth of capital expenditures in Canada since the end of World War II has been one of the most dynamic factors in the country's rapid economic expansion. It has not only added to production facilities but has contributed to greatly increased labour productivity.

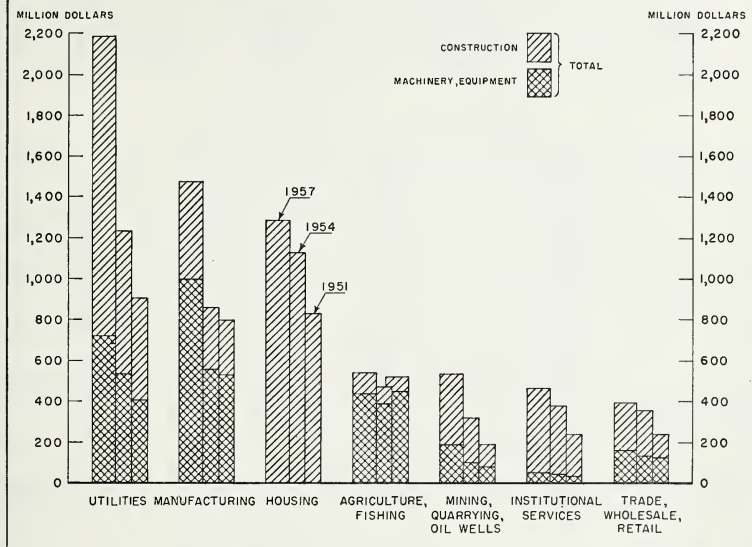
2.—Summary of Capital Expenditures and Repair and Maintenance Expenditures by Economic Sector 1955-57

NOTE.—Actual expenditures 1955; preliminary actual 1956; intentions 1957.

(Millions of dollars)

Type of Enterprise and Year	Capital			Repair			Capital and Repair		
	Con- struc- tion	Ma- chinery and Equip- ment	Total	Con- struc- tion	Ma- chinery and Equip- ment	Total	Con- struc- tion	Ma- chinery and Equip- ment	Total
Agriculture and fishing.....1955	87	339	426	66	123	189	153	462	615
1956	99	396	495	74	130	204	173	526	699
1957	104	435	539	76	135	211	180	570	750
Forestry.....1955	36	27	63	18	31	49	54	58	112
1956	40	34	74	18	27	45	58	61	119
1957	35	27	62	19	25	44	54	52	106
Mining, quarrying and oil wells.....1955	248	88	336	16	50	66	264	138	402
1956	369	167	536	19	60	79	388	227	615
1957	346	184	530	21	63	84	367	247	614
Manufacturing.....1955	345	602	947	100	413	513	445	1,015	1,460
1956	477	872	1,349	105	447	552	582	1,319	1,901
1957	474	997	1,471	103	440	543	577	1,437	2,014
Utilities.....1955	649	450	1,099	257	343	600	906	793	1,699
1956	1,047	583	1,630	293	387	680	1,340	970	2,310
1957	1,464	721	2,185	268	389	657	1,732	1,110	2,842
Construction.....1955	16	158	174	4	103	107	20	261	281
1956	21	170	191	3	108	111	24	278	302
1957	17	151	168	3	100	103	20	251	271
Housing.....1955	1,499	—	1,499	238	—	238	1,737	—	1,737
1956	1,575	—	1,575	256	—	256	1,831	—	1,831
1957	1,283	—	1,283	273	—	273	1,556	—	1,556
Trade (wholesale and retail).....1955	181	148	329	33	30	63	214	178	392
1956	181	138	319	33	33	66	214	171	385
1957	234	159	393	34	35	69	268	194	462
Finance, insurance and real estate.....1955	82	20	102	10	4	14	92	24	116
1956	103	22	125	10	5	15	113	27	140
1957	128	23	151	9	5	14	137	28	165
Commercial services.....1955	33	97	130	12	41	53	45	138	183
1956	53	110	163	12	41	53	65	151	216
1957	66	118	184	14	41	55	80	159	239
Institutional services.....1955	367	41	408	42	7	49	409	48	457
1956	360	42	402	43	7	50	403	49	452
1957	421	48	469	42	8	50	463	56	519
Government departments....1955	771	66	837	194	30	224	965	96	1,061
1956	958	83	1,041	240	37	277	1,198	120	1,318
1957	1,014	84	1,098	254	40	294	1,268	124	1,392
Totals.....1955	4,314	2,036	6,350	990	1,175	2,165	5,304	3,211	8,515
1956	5,283	2,617	7,900	1,106	1,282	2,388	6,389	3,899	10,288
1957	5,586	2,947	8,533	1,116	1,281	2,397	6,702	4,228	10,930

CAPITAL EXPENDITURES BY ECONOMIC SECTORS, 1951, 1954 AND 1957



Details of some of the above economic sectors are given in Table 3. The construction industry and housing are dealt with in Sections 2 and 3 of this Chapter.

3.—Details of Capital Expenditures and Repair and Maintenance Expenditures for Certain Economic Sectors 1955-57

NOTE.—Actual expenditures 1955; preliminary actual 1956; intentions 1957.

(Millions of dollars)

Type of Enterprise and Year	Capital			Repair			Capital and Repair		
	Con- struction	Ma- chinery and Equip- ment	Total	Con- struction	Ma- chinery and Equip- ment	Total	Con- struction	Ma- chinery and Equip- ment	Total
MANUFACTURING									
Foods and beverages.....1955	38.5	65.2	103.7	12.7	43.6	56.3	51.2	108.8	160.0
1956	34.7	68.4	103.1	12.0	39.5	51.5	46.7	107.9	154.6
1957	30.4	62.9	93.3	11.1	37.6	48.7	41.5	100.5	142.0
Tobacco and tobacco products.....1955	1.6	2.8	4.4	0.9	1.7	2.6	2.5	4.5	7.0
1956	3.1	3.9	7.0	0.8	1.9	2.7	3.9	5.8	9.7
1957	3.7	5.7	9.4	0.6	1.7	2.3	4.3	7.4	11.7
Rubber products.....1955	3.0	12.1	15.1	0.9	6.8	7.7	3.9	18.9	22.8
1956	2.5	11.2	13.7	1.0	7.2	8.2	3.5	18.4	21.9
1957	7.1	18.3	25.4	1.1	7.3	8.4	8.2	25.6	33.8

3.—Details of Capital Expenditures and Repair and Maintenance Expenditures for Certain Economic Sectors 1955-57—continued

Type of Enterprise and Year	Capital			Repair			Capital and Repair		
	Con- struction	Ma- chinery and Equip- ment	Total	Con- struction	Ma- chinery and Equip- ment	Total	Con- struction	Ma- chinery and Equip- ment	Total
MANUFACTURING—concluded									
Leather products.....1955	0.5	1.8	2.3	0.6	2.3	2.9	1.1	4.1	5.2
1956	1.7	2.2	3.9	0.9	2.4	3.3	2.6	4.6	7.2
1957	1.3	1.6	2.9	0.6	2.1	2.7	1.9	3.7	5.6
Textile products.....1955	7.6	20.4	28.0	2.9	16.6	19.5	10.5	37.0	47.5
1956	9.1	25.7	34.8	3.6	18.3	21.9	12.7	44.0	56.7
1957	6.1	30.9	37.0	5.0	18.9	23.9	11.1	49.8	60.9
Clothing.....1955	1.4	7.8	9.2	1.2	3.8	5.0	2.6	11.6	14.2
1956	1.7	7.4	9.1	1.3	4.4	5.7	3.0	11.8	14.8
1957	0.8	6.3	7.1	1.2	4.3	5.5	2.0	10.6	12.6
Wood products.....1955	12.1	30.9	43.0	7.6	29.3	36.9	19.7	60.2	79.9
1956	12.5	32.2	44.7	8.1	23.7	31.8	20.6	55.9	76.5
1957	7.9	20.8	28.7	6.3	21.7	28.0	14.2	42.5	56.7
Paper products.....1955	33.1	105.8	138.9	8.9	75.1	84.0	42.0	180.9	222.9
1956	82.7	180.1	262.8	10.6	86.6	97.2	93.3	266.7	360.0
1957	59.2	180.3	239.5	9.8	87.0	96.8	69.0	267.3	336.3
Printing, publishing and allied trades.....1955	6.4	17.7	24.1	2.2	4.4	6.6	8.6	22.1	30.7
1956	6.0	19.5	25.5	1.8	5.0	6.8	7.8	24.5	32.3
1957	16.9	16.8	33.7	1.6	4.5	6.1	18.5	21.3	39.8
Iron and steel products.....1955	27.0	68.2	95.2	12.6	75.7	88.3	39.6	143.9	183.5
1956	44.4	114.3	158.7	14.7	85.4	100.1	59.1	199.7	258.8
1957	54.1	148.6	202.7	15.0	80.6	95.6	69.1	229.2	298.3
Transportation equipment.....1955	20.2	34.1	54.3	10.6	28.2	38.8	30.8	62.3	93.1
1956	18.2	42.3	60.5	10.4	30.4	40.8	28.6	72.7	101.3
1957	18.0	54.7	72.7	10.4	30.2	40.6	28.4	84.9	113.3
Non-ferrous metal products.....1955	37.3	46.4	83.7	8.2	43.8	52.0	45.5	90.2	135.7
1956	55.9	54.8	110.7	9.5	53.7	63.2	65.4	108.5	173.9
1957	85.0	113.7	198.7	8.6	50.1	58.7	93.6	163.8	257.4
Electrical apparatus and supplies.....1955	8.1	20.4	28.5	2.7	13.3	16.0	10.8	33.7	44.5
1956	13.2	26.4	39.6	2.9	13.5	16.4	16.1	39.9	56.0
1957	15.1	40.9	56.0	3.3	13.7	17.0	18.4	54.6	73.0
Non-metallic mineral products.....1955	22.2	25.4	47.6	3.0	27.0	30.0	25.2	52.4	77.6
1956	51.7	64.8	116.5	2.6	28.6	31.2	54.3	93.4	147.7
1957	27.0	52.3	79.3	2.8	31.3	34.1	29.8	83.6	113.4
Products of petroleum and coal.....1955	100.4	8.7	109.1	19.1	8.1	27.2	119.5	16.8	136.3
1956	89.2	16.3	105.5	17.9	10.8	28.7	107.1	27.1	134.2
1957	93.5	12.3	105.8	18.3	10.3	28.6	111.8	22.6	134.4
Chemical products.....1955	21.6	34.7	56.3	4.7	30.1	34.8	26.3	64.8	91.1
1956	47.8	75.1	122.9	5.9	32.5	38.4	53.7	107.6	161.3
1957	45.7	92.6	138.3	5.9	35.6	41.5	51.6	128.2	179.8
Miscellaneous.....1955	3.7	7.1	10.8	1.3	3.3	4.6	5.0	10.4	15.4
1956	2.5	7.6	10.1	1.3	2.9	4.2	3.8	10.5	14.3
1957	1.8	7.4	9.2	1.3	3.2	4.5	3.1	10.6	13.7
Capital items charged to operating expenses.....1955	—	92.3	92.3	—	—	—	—	92.3	92.3
1956	—	119.9	119.9	—	—	—	—	119.9	119.9
1957	—	130.6	130.6	—	—	—	—	130.6	130.6
Totals, Manufacturing.....1955	344.7	601.8	946.5	100.1	413.1	513.2	444.8	1,014.9	1,459.7
1956	476.9	872.1	1,349.0	105.3	446.8	552.1	582.2	1,318.9	1,901.1
1957	473.6	996.7	1,470.3	102.9	440.1	543.0	576.5	1,436.8	2,013.3

3.—Details of Capital Expenditures and Repair and Maintenance Expenditures for Certain Economic Sectors 1955-57—continued

Type of Enterprise and Year	Capital			Repair			Capital and Repair			
	Con- struction	Ma- chinery and Equip- ment	Total	Con- struction	Ma- chinery and Equip- ment	Total	Con- struction	Ma- chinery and Equip- ment	Total	
UTILITIES										
Central electric stations.....	1955	307.0	98.6	405.6	33.2	21.9	55.1	340.2	120.5	460.7
	1956	447.6	139.4	587.0	35.9	20.5	56.4	483.5	159.9	643.4
	1957	595.4	149.9	745.3	39.9	20.2	60.1	635.3	170.1	805.4
Gas distribution.....	1955	18.0	1.7	19.7	3.0	1.9	4.9	21.0	3.6	24.6
	1956	43.2	3.3	46.5	3.4	1.9	5.3	46.6	5.2	51.8
	1957	48.4	3.0	51.4	3.1	1.6	4.7	51.5	4.6	56.1
Steam railways and tele- graphs.....	1955	88.6	107.8	196.4	171.1	163.0	334.1	259.7	270.8	530.5
	1956	135.8	177.0	312.8	200.1	192.2	392.3	335.9	369.2	705.1
	1957	152.7	245.0	397.7	169.4	193.9	363.3	322.1	438.9	761.0
Electric railways.....	1955	4.8	9.8	14.6	5.4	14.8	20.2	10.2	24.6	34.8
	1956	8.3	12.9	21.2	5.6	15.1	20.7	13.9	28.0	41.9
	1957	8.7	11.8	20.5	5.3	15.8	21.1	14.0	27.6	41.6
Water transport and services..	1955	19.0	25.9	44.9	3.0	15.3	18.3	22.0	41.2	63.2
	1956	56.8	24.2	81.0	3.5	17.4	20.9	60.3	41.6	101.9
	1957	125.4	28.5	153.9	4.5	16.6	21.1	129.9	45.1	175.0
Motor carriers.....	1955	2.6	35.8	38.4	0.9	35.5	36.4	3.5	71.3	74.8
	1956	4.3	30.8	35.1	1.1	34.9	36.0	5.4	65.7	71.1
	1957	4.6	26.2	30.8	1.2	34.3	35.5	5.8	60.5	66.3
Grain elevators.....	1955	8.4	2.5	10.9	5.0	1.9	6.9	13.4	4.4	17.8
	1956	11.0	3.6	14.6	4.7	2.1	6.8	15.7	5.7	21.4
	1957	5.9	1.9	7.8	4.3	1.7	6.0	10.2	3.6	13.8
Telephones.....	1955	90.8	121.1	211.9	19.3	57.5	76.8	110.1	178.6	288.7
	1956	91.2	144.5	235.7	21.5	63.4	84.9	112.7	207.9	320.6
	1957	110.1	186.0	296.1	22.4	64.8	87.2	132.5	250.8	383.3
Broadcasting.....	1955	4.1	7.3	11.4	0.3	1.7	2.0	4.4	9.0	13.4
	1956	3.4	3.9	7.3	0.4	1.7	2.1	3.8	5.6	9.4
	1957	1.7	4.0	5.7	0.5	2.0	2.5	2.2	6.0	8.2
Municipal waterworks.....	1955	48.2	2.2	50.4	12.2	1.2	13.4	60.4	3.4	63.8
	1956	64.5	2.8	67.3	12.8	1.6	14.4	77.3	4.4	81.7
	1957	86.8	4.1	90.9	13.1	2.1	15.2	99.9	6.2	106.1
Other utilities ¹	1955	57.4	27.0	84.4	4.0	28.5	32.5	61.4	55.5	116.9
	1956	180.6	28.3	208.9	3.6	36.3	39.9	184.2	64.6	248.8
	1957	324.5	46.1	370.6	4.2	36.1	40.3	328.7	82.2	410.9
Capital items charged to operating expenses.....	1955	—	10.2	10.2	—	—	—	—	10.2	10.2
	1956	—	12.6	12.6	—	—	—	—	12.6	12.6
	1957	—	14.2	14.2	—	—	—	—	14.2	14.2
Totals, Utilities.....	1955	648.9	449.9	1,098.8	257.4	343.2	600.6	906.3	793.1	1,699.4
	1956	1,046.7	583.3	1,630.0	292.6	387.1	679.7	1,339.3	970.4	2,309.7
	1957	1,464.2	720.7	2,184.9	267.9	389.1	657.0	1,732.1	1,109.8	2,841.9
TRADE										
Wholesale.....	1955	21.3	26.0	47.3	4.9	6.6	11.5	26.2	32.6	58.8
	1956	32.9	24.6	57.5	4.3	7.5	11.8	37.2	32.1	69.3
	1957	40.7	18.9	59.6	4.0	7.5	11.5	44.7	26.4	71.1
Chain stores.....	1955	30.2	24.8	55.0	4.0	3.0	7.0	34.2	27.8	62.0
	1956	28.0	23.5	51.5	3.7	3.7	7.4	31.7	27.2	58.9
	1957	37.5	30.0	67.5	3.4	4.0	7.4	40.9	34.0	74.9

¹ Includes air transport, warehousing and oil and gas pipelines.

3.—Details of Capital Expenditures and Repair and Maintenance Expenditures for Certain Economic Sectors 1955-57—concluded

Type of Enterprise and Year	Capital			Repair			Capital and Repair		
	Con- struc- tion	Ma- chinery and Equip- ment	Total	Con- struc- tion	Ma- chinery and Equip- ment	Total	Con- struc- tion	Ma- chinery and Equip- ment	Total
TRADE—concluded									
Independent stores.....1955	72.7	53.3	126.0	12.4	9.4	21.8	85.1	62.7	147.8
1956	58.6	48.3	106.9	12.3	11.0	23.3	70.9	59.3	130.2
1957	82.5	62.1	144.6	12.4	11.7	24.1	94.9	73.8	168.7
Department stores.....1955	19.4	7.8	27.2	4.1	2.5	6.6	23.5	10.3	33.8
1956	12.9	4.4	17.3	3.9	2.7	6.6	16.8	7.1	23.9
1957	15.8	6.0	21.8	3.9	2.7	6.6	19.7	8.7	28.4
Automotive trade.....1955	37.7	23.0	60.7	7.8	8.5	16.3	45.5	31.5	77.0
1956	48.8	24.1	72.9	8.8	8.4	17.2	57.6	32.5	90.1
1957	57.5	28.0	85.5	9.8	9.0	18.8	67.3	37.0	104.3
Capital items charged to operating expenses.....1955	—	13.2	13.2	—	—	—	—	13.2	13.2
1956	—	12.7	12.7	—	—	—	—	12.7	12.7
1957	—	14.4	14.4	—	—	—	—	14.4	14.4
Totals, Trade.....1955	181.3	148.1	329.4	33.2	30.0	63.2	214.5	178.1	392.6
1956	181.2	137.6	318.8	33.0	33.3	66.3	211.2	170.9	385.1
1957	234.0	159.4	393.4	33.5	34.9	68.4	267.5	194.3	461.8
INSTITUTIONAL SERVICES									
Churches.....1955	33.9	4.2	38.1	8.0	0.4	8.4	41.9	4.6	46.5
1956	43.8	2.6	46.4	7.0	0.5	7.5	50.8	3.1	53.9
1957	62.3	3.2	65.5	7.2	0.5	7.7	69.5	3.7	73.2
Universities.....1955	22.0	3.2	25.2	3.1	0.2	3.3	25.1	3.4	28.5
1956	25.2	4.0	29.2	3.1	0.3	3.4	28.3	4.3	32.6
1957	29.0	4.9	33.9	3.2	0.3	3.5	32.2	5.2	37.4
Schools.....1955	171.4	17.0	188.4	18.2	2.7	20.9	189.6	19.7	209.3
1956	172.4	16.8	189.2	18.2	3.0	21.2	190.6	19.8	210.4
1957	180.4	17.2	197.6	18.5	3.2	21.7	198.9	20.4	219.3
Hospitals.....1955	130.0	16.2	146.2	11.7	3.3	15.0	141.7	19.5	161.2
1956	107.8	18.3	126.1	13.1	3.4	16.5	120.9	21.7	142.6
1957	135.8	22.3	158.1	12.4	3.7	16.1	148.2	26.0	174.2
Other institutional services ¹ ..1955	9.6	0.7	10.3	1.1	—	1.1	10.7	0.7	11.4
1956	10.5	0.5	11.0	1.3	—	1.3	11.8	0.5	12.3
1957	13.8	0.7	14.5	0.5	—	0.5	14.3	0.7	15.0
Totals, Institutions.....1955	366.9	41.3	408.2	42.1	6.6	48.7	409.0	47.9	456.9
1956	359.7	42.2	401.9	42.7	7.2	49.9	402.4	49.4	451.8
1957	421.3	48.3	469.6	41.8	7.7	49.5	463.1	56.0	519.1

¹ Includes privately operated social and welfare institutions.

A summary of the capital expenditures in each province for the years 1955-57 is given in Table 4. Such expenditures represent gross additions to the capital stock of the province and are a reflection of economic activity in that area, but the actual production of these assets may generate its major employment in income-giving effects in other regions. For example the spending of millions of dollars on oil refineries and pipelines in Western Canada means activity in the steel industries of Ontario as well as construction activity in the Prairie Provinces.

4.—Summary of Capital Expenditures and Repair and Maintenance Expenditures by Province 1955-57

NOTE.—Actual expenditures 1955; preliminary actual 1956; intentions 1957.

(Millions of dollars)

Province and Year	Capital			Repair			Capital and Repair		
	Con- struc- tion	Ma- chinery and Equip- ment	Total	Con- struc- tion	Ma- chinery and Equip- ment	Total	Con- struc- tion	Ma- chinery and Equip- ment	Total
Newfoundland.....1955	66	23	89	14	14	28	80	37	117
.....1956	63	28	91	17	13	30	80	41	121
.....1957	77	41	118	17	11	28	94	52	146
Prince Edward Island.....1955	12	9	21	4	5	9	16	14	30
.....1956	12	9	21	4	7	11	16	16	32
.....1957	12	10	22	4	6	10	16	16	32
Nova Scotia.....1955	108	56	164	26	31	57	134	87	221
.....1956	112	60	172	35	34	69	147	94	241
.....1957	106	73	179	35	35	70	141	108	249
New Brunswick.....1955	126	42	168	31	30	61	157	72	229
.....1956	128	54	182	39	32	71	167	86	253
.....1957	120	60	180	39	32	71	159	92	251
Quebec.....1955	1,074	472	1,546	236	305	541	1,310	777	2,087
.....1956	1,269	578	1,847	266	309	575	1,535	887	2,422
.....1957	1,313	672	1,985	261	307	568	1,574	979	2,553
Ontario.....1955	1,486	785	2,271	362	453	815	1,848	1,238	3,086
.....1956	1,808	1,022	2,830	388	503	891	2,196	1,525	3,721
.....1957	2,005	1,159	3,164	400	502	902	2,405	1,661	4,066
Manitoba.....1955	197	104	301	58	58	116	255	162	417
.....1956	245	114	359	68	70	138	313	184	497
.....1957	291	118	409	68	72	140	359	190	549
Saskatchewan.....1955	219	130	349	64	58	122	283	188	471
.....1956	290	171	461	70	72	142	360	243	603
.....1957	280	179	459	69	72	141	349	251	600
Alberta.....1955	548	187	735	88	95	183	636	282	918
.....1956	644	266	910	104	105	209	748	371	1,119
.....1957	609	250	859	107	109	216	716	359	1,075
British Columbia ¹.....1955	479	228	707	108	125	233	587	353	940
.....1956	711	315	1,026	114	137	251	825	452	1,277
.....1957	774	387	1,161	114	135	249	888	522	1,410
Canada ².....1955	4,315	2,036	6,351	991	1,174	2,165	5,306	3,210	8,516
.....1956	5,282	2,617	7,899	1,105	1,282	2,387	6,387	3,899	10,286
.....1957	5,587	2,949	8,536	1,114	1,281	2,395	6,701	4,230	10,931

¹ Includes the Yukon and Northwest Territories.
Table 2 are caused by minor adjustments and rounding.

² Slight differences between these and totals those of

Section 2.—The Construction Industry

Subsection 1.—Value of Construction Work Performed

Statistics of the construction industry are based largely on information received at the same time and from the same sources as the data on capital expenditures which appear in Section 1.* The data represent the estimated total value of all new and repair construction.

Canada's intended construction program for 1957 is estimated at \$6,702,000,000, about 5 p.c. above the 1956 level. This contrasts with a rise in 1956 of more than \$1,000,000,000 or 20 p.c. over the 1955 realization of \$5,311,000,000. New construction in 1957, estimated at \$5,563,000,000, is expected to account for most of the increase. The value of repairs to be undertaken in that year is estimated at \$1,139,000,000.

* An explanation of sources and methods is given in the 1955 Year Book, p. 727, and DBS annual report *Construction in Canada*.

Table 5 shows construction, both new and repair, in constant as well as current dollars. It is interesting to note that in 1956 construction work accounted for over one-fifth of the gross national product. The slight differences between these figures and the corresponding figures of Section 1 are accounted for by rounding and minor revisions.

5.—Value of Construction Work Performed, Current and Constant (1949) Dollars 1948-57

NOTE.—Actual 1948-55; preliminary 1956; intentions 1957.

(Millions of dollars)

Year	New Construction		Repair Construction		Total Construction		Total Construction as P.C. of Gross National Product	
	Current	Constant	Current	Constant	Current	Constant	Current	Constant
1948.....	1,877	1,947	694	720	2,571	2,667	16.5	17.0
1949 ¹	2,124	2,124	732	732	2,856	2,856	17.3	17.5
1950.....	2,366	2,247	766	727	3,132	2,974	17.2	17.2
1951.....	2,734	2,308	927	783	3,661	3,091	17.0	16.9
1952.....	3,282	2,616	916	730	4,198	3,346	18.0	17.1
1953.....	3,666	2,824	974	749	4,640	3,573	19.0	17.6
1954.....	3,700	2,852	1,023	787	4,723	3,639	19.6	18.5
1955.....	4,270	3,206	1,041	779	5,311	3,985	19.8	18.5
1956.....	5,260	3,730	1,129	798	6,389	4,528	21.2	15.0
1957.....	5,563	..	1,139	..	6,702	..	..	..

¹ Newfoundland included from 1949.

Table 6, which compares contract construction with other construction, illustrates that contractors are accounting for a greater proportion of the work each year; in 1954 they handled 72 p.c. of all work; in 1955, 73 p.c.; in 1956, 76 p.c.; and in 1957, 77 p.c. This trend is apparent in both new and repair work.

6.—Value of Construction Work Performed by Contractors and Others 1954-57

NOTE.—Actual 1954 and 1955; preliminary 1956; intentions 1957.

(Millions of dollars)

Item	1954	1955	1956	1957
Contract Construction	3,382	3,876	4,849	5,141
New.....	3,011	3,484	4,388	4,659
Repair.....	371	392	461	482
Other Construction¹	1,341	1,435	1,540	1,561
New.....	689	786	872	904
Repair.....	652	649	668	657
Totals, Construction	4,723	5,311	6,389	6,702
New.....	3,700	4,270	5,260	5,563
Repair.....	1,023	1,041	1,129	1,139

¹ Work done by the labour forces of utility, manufacturing, mining and logging firms and government departments, home-owner builders and other persons or firms not primarily engaged in the construction industry.

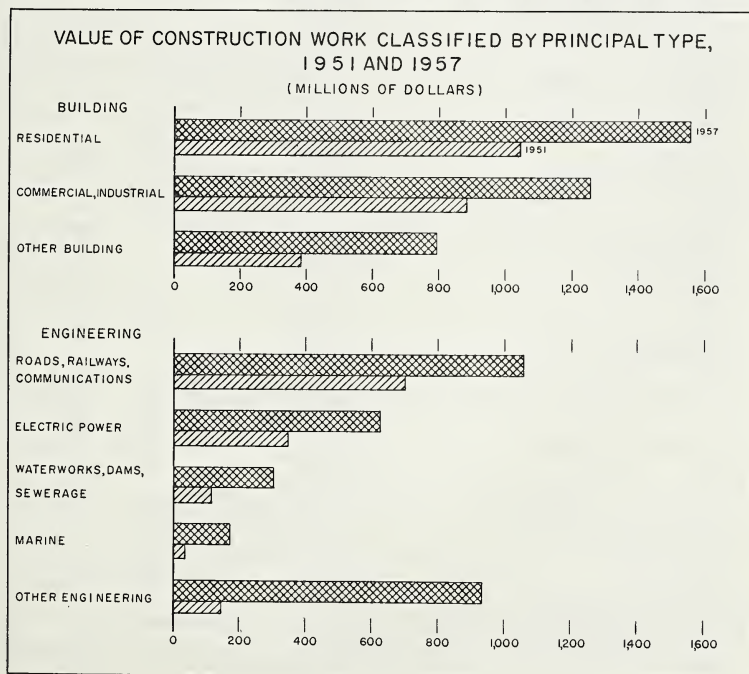
The estimated increase in construction in 1957, a moderate 5 p.c., was low because of an anticipated drop in residential construction. Estimates for most other principal types of construction—electric power construction, gas and oil facilities, commercial and institutional construction—were substantially higher as shown in Table 7.

7.—Value of Construction Work Performed by Principal Type 1954-57

NOTE.—Actual 1954 and 1955; preliminary 1956; intentions 1957.

(Millions of dollars)

Type of Construction	1954		1955		1956		1957	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
Building Construction	2,914	61.7	3,378	63.6	3,789	59.3	3,608	53.8
Residential.....	1,400	29.6	1,737	32.7	1,830	28.6	1,556	23.2
Industrial.....	364	7.7	398	7.5	594	9.3	568	8.4
Commercial.....	546	11.6	514	9.7	599	9.4	688	10.3
Institutional.....	377	8.0	464	8.7	450	7.0	528	7.9
Other.....	227	4.8	265	5.0	316	5.0	268	4.0
Engineering	1,809	38.3	1,933	36.4	2,600	40.7	3,094	46.2
Marine construction.....	72	1.5	76	1.4	128	2.0	173	2.6
Road, highway and aerodrome construction.....	473	10.0	519	9.8	617	9.7	667	10.0
Waterworks and sewage systems.....	183	3.9	149	2.8	193	3.0	247	3.7
Dams and irrigation.....	33	0.7	39	0.7	59	0.9	57	0.8
Electric power construction.....	322	6.8	338	6.4	461	7.2	627	9.4
Railway, telephone and telegraph construction.....	295	6.3	313	5.9	389	6.1	390	5.8
Gas and oil facilities.....	270	5.7	339	6.4	533	8.3	669	10.0
Other engineering construction.....	161	3.4	160	3.0	220	3.5	264	3.9
Totals, Construction	4,723	100.0	5,311	100.0	6,389	100.0	6,702	100.0



Shifts within the program of construction from 1955 to 1956 and from 1956 to 1957 are shown in Table 8.

**8.—Dollar Change in Value of Construction Work Performed by Type of Structure
1955 to 1956 and 1956 to 1957**

Type of Structure	Change 1955 to 1956	Change 1956 to 1957	Type of Structure	Change 1955 to 1956	Change 1956 to 1957
	\$'000,000	\$'000,000		\$'000,000	\$'000,000
Building Construction			Road, Highway and Aerodrome		
Residential	93	-275	—concl.		
Dwellings, single, double, du- plexes and apartments.....	93	-275	Dirt, clay or other streets, roads, parking lots, etc.....	-1	-2
Industrial	196	-25	Grading, scraping, oiling, filling..	-18	0
Factories, plants, workshops.....	125	-16	Sidewalks, paths.....	1	1
Mine and mine mill buildings.....	57	-10	Aerodromes, landing fields, run- ways, tarmac.....	-8	26
Railway stations, offices, road- way buildings.....	9	-2	Waterworks and Sewage Systems	45	53
Railway shops, engine houses, water and fuel stations.....	5	2	Tile drains, drainage ditches, storm sewers.....	-16	0
Commercial	86	88	Water mains, hydrants and serv- ices.....	16	20
Warehouses, storehouses, refriger- ated storage, etc.....	-2	14	Sewage systems and connections.....	37	33
Grain elevators.....	3	2	Pumping stations, water.....	9	-3
Hotels, clubs, restaurants, cafe- terias, tourist cabins.....	22	13	Water storage tanks.....	-2	4
Office buildings.....	64	10	Dams and Irrigation	20	-2
Stores, retail and wholesale.....	-25	36	Dams and reservoirs.....	14	-5
Garages and service stations.....	17	9	Irrigation and land reclamation projects.....	6	3
Theatres, arenas, amusement and recreational buildings.....	8	4	Electric Power	123	166
Laundries and dry cleaning estab- lishments.....	0	-1	Electric power, generating plants, including water conveying and controlling structures.....	79	126
Institutional	-14	79	Electric transformer stations.....	16	11
Schools and other educational buildings.....	17	19	Power transmission and distri- bution lines, trolley wires.....	27	28
Churches and other religious buildings.....	-2	5	Streetlighting.....	1	1
Hospitals, sanatoria, clinics, first- aid stations, etc.....	-17	37	Railway, Telephone and Tele- graph	76	1
Other institutional buildings.....	-12	18	Railway tracks and roadbed.....	58	-12
Other Building Construction	50	-48	Signals and interlockers.....	4	0
Farm buildings (excluding dwell- ings).....	15	6	Telegraph and telephone lines, underground and marine cables	14	13
Broadcasting, radio and televi- sion, relay and booster stations, telephone exchanges.....	58	-45	Gas and Oil Facilities	194	137
Aeroplane hangars.....	2	2	Gas mains and services.....	20	12
Passenger terminals, bus, boat or air.....	0	0	Pumping stations, oil.....	0	5
Armouries, barracks, drill halls, etc.....	-37	-3	Pumping stations, gas.....	2	2
Bunkhouses, dormitories, cook- eries and camps.....	7	-7	Oil storage tanks.....	4	6
Miscellaneous building construc- tion.....	5	-2	Gas storage tanks.....	1	2
Totals, Building Construction	411	-181	Oil pipelines.....	7	2
Engineering Construction			Gas pipelines.....	116	100
Marine	52	45	Oil wells.....	43	-19
Docks, wharves, piers, break- waters.....	13	3	Gas wells.....	0	4
Retaining walls, embankments, riprapping.....	2	-2	Oil-refinery processing units.....	-11	8
Canals and waterways.....	-2	-1	Natural gas cleaning plants.....	11	15
Dredging and pile driving.....	9	27	Other Engineering Construction	60	44
Dyke construction.....	7	2	Bridges, trestles, culverts, over- passes, viaducts.....	38	30
Logging booms.....	0	-2	Tunnels and subways.....	1	4
Other marine construction.....	22	16	Incinerators.....	-1	2
Road, Highway and Aerodrome	98	50	Park systems, landscaping, sod- ding, etc.....	0	2
Hard surfaced or paved streets, highways, parking lots, etc.....	90	27	Swimming pools, tennis courts, outdoor recreational facilities.....	0	1
Gravel or stone streets, high- ways, roads, parking lots, etc.,	33	-2	Mineshafts and other below-sur- face workings.....	17	9
			Fences, snowsheds, signs, guard- rails.....	1	0
			Miscellaneous engineering con- struction.....	4	-4
			Totals, Engineering Construc- tion	668	494
			Totals, Construction	1,078	313

Table 9 gives estimates of total expenditures in Canada on each type of construction for which information is available. It contains the detailed data from which Tables 7 and 8 are derived.

9.—Value of Construction Work Performed by Type of Structure 1955-57

NOTE.—Actual 1955; preliminary 1956; intentions 1957.

Type of Structure	1955			1956			1957		
	New	Repair	Total	New	Repair	Total	New	Repair	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Building Construction									
Residential	1,499,300	238,000	1,737,300	1,574,900	255,500	1,830,400	1,283,000	272,800	1,555,800
Dwellings, single, double, duplexes and apartments	1,499,300	238,000	1,737,300	1,574,900	255,500	1,830,400	1,283,000	272,800	1,555,800
Industrial	293,375	104,712	398,087	475,409	118,380	593,789	453,987	114,311	568,298
Factories, plants, workshops, food canneries....	257,837	79,289	337,126	377,463	84,554	462,017	363,130	82,904	446,034
Mine and mine mill buildings.....	26,109	6,758	32,867	82,554	7,400	89,954	72,803	7,610	80,413
Railway stations, offices, roadway buildings.....	5,082	10,718	15,800	9,261	15,229	24,490	9,261	13,099	22,360
Railway shops, engine houses, water and fuel stations.....	4,347	7,947	12,294	6,131	11,197	17,328	8,793	10,698	19,491
Commercial	427,232	86,259	513,491	509,973	89,297	599,270	598,797	88,810	687,607
Warehouses, storehouses, refrigerated storage, etc.	72,573	11,125	83,698	70,042	11,833	81,875	81,529	11,457	93,986
Grain elevators.....	10,147	5,607	15,754	12,376	5,977	18,353	15,609	5,366	20,975
Hotels, clubs, restaurants, cafeterias, tourist cabins	22,392	10,438	32,830	43,506	11,050	54,556	54,020	13,537	67,557
Office buildings.....	125,520	26,268	151,797	186,434	28,996	215,430	198,122	27,536	225,658
Stores, retail and wholesale.....	144,645	23,167	167,812	121,910	21,322	143,232	158,010	21,010	179,020
Garages and service stations.....	33,217	6,384	39,601	49,140	7,053	56,193	57,908	7,210	65,118
Theatres, arenas, amusement and recreational buildings.....	17,627	2,379	20,006	25,415	2,203	27,618	30,126	1,886	32,012
Laundries and dry cleaning establishments.....	1,102	891	1,993	1,150	863	2,013	473	808	1,281
Institutional	408,201	55,531	463,732	397,809	51,615	449,424	477,231	50,981	528,212
Schools and other educational buildings.....	199,983	22,025	222,008	215,690	22,943	238,633	234,338	23,063	257,401
Churches and other religious buildings.....	32,591	7,945	40,536	32,140	6,479	38,619	37,088	6,848	43,936
Hospitals, sanatoria, clinics, first-aid stations, etc.....	132,967	13,401	146,368	114,526	14,859	129,385	151,888	14,473	166,361
Other institutional buildings.....	42,660	12,160	54,820	35,453	7,334	42,787	53,917	6,597	60,514
Other Building Construction	183,185	82,010	265,195	226,516	89,078	315,594	176,160	91,598	267,758
Farm buildings (excluding dwellings).....	80,688	57,606	138,294	89,252	64,280	153,532	93,785	66,216	160,001
Broadcasting, radio and television, relay and booster stations, telephone exchanges.....	25,418	1,320	26,738	83,339	1,264	84,603	38,174	1,526	39,700
Aeroplane hangars.....	5,093	1,770	6,863	6,952	1,842	8,794	9,341	1,950	11,291
Passenger terminals, bus, boat or air.....	1,583	86	1,669	1,033	181	1,214	585	359	944
Armouries, barracks, drill halls, etc.....	53,514	12,638	66,152	16,255	13,073	29,328	12,732	13,260	25,992
Bunkhouses, dormitories, camp cookeries, bush depots and camps.....	12,192	5,173	17,365	19,971	4,766	24,737	13,445	4,645	18,090
Other building construction.....	4,697	3,417	8,114	9,714	3,672	13,386	8,098	3,642	11,740
Totals, Building Construction	2,811,293	566,512	3,377,805	3,184,607	603,870	3,788,477	2,989,175	618,500	3,607,675

9.—Value of Construction Work Performed by Type of Structure 1955-57—continued

Type of Structure	1955			1956			1957		
	New	Repair	Total	New	Repair	Total	New	Repair	Total
Engineering Construction	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Marine	60,945	15,277	76,222	111,493	16,454	127,947	156,221	16,816	173,031
Docks, wharves, piers, breakwaters.....	22,116	7,445	29,561	34,588	8,031	42,619	38,225	7,778	46,003
Retaining walls, embankments, riprapping.....	2,011	542	2,553	4,139	550	4,689	2,143	582	2,725
Canals and waterways...	3,297	1,611	4,908	2,041	1,291	3,332	1,367	1,308	2,675
Dredging and pile driving	16,210	3,278	19,488	25,042	3,456	28,498	51,221	4,399	55,620
Dyke construction.....	5,411	268	5,679	12,237	309	12,546	14,615	324	14,939
Logging booms.....	2,791	884	3,675	2,902	1,109	4,011	1,494	1,006	2,500
Other marine construction	9,109	1,249	10,358	30,544	1,708	32,252	47,156	1,413	48,569
Road, Highway and Aerodrome	359,209	160,050	519,259	448,227	168,586	616,813	485,924	181,221	667,145
Hard surfaced or paved streets, highways, parking lots, etc.....	168,109	69,806	237,915	245,597	82,459	328,056	260,444	94,654	355,098
Gravel or stone streets, highways, roads, parking lots, etc.....	98,578	54,430	153,008	125,911	60,440	186,351	124,502	60,223	184,725
Dirt, clay or other streets roads, parking lots, etc..	34,763	20,755	55,518	40,050	14,966	55,016	36,686	15,843	52,529
Grading, scraping, oiling filling.....	28,607	11,287	39,894	14,159	7,496	21,655	14,437	7,081	21,518
Sidewalks, paths.....	13,878	3,123	17,001	15,413	2,691	18,104	16,583	2,834	19,417
Aerodromes, landing fields, runways, tarmac.	15,274	649	15,923	7,097	534	7,631	33,272	586	33,858
Waterworks and Sewage Systems	127,214	21,434	148,648	167,668	25,908	193,576	219,483	27,340	246,823
Tile drains, drainage ditches, storm sewers...	24,687	2,536	27,223	7,279	3,789	11,068	7,012	4,055	11,067
Water mains, hydrants and services.....	45,333	12,521	57,854	60,005	13,876	73,881	79,146	14,633	93,779
Sewage systems and connections.....	49,052	5,321	54,373	84,737	7,056	91,793	117,434	7,515	124,949
Pumping stations, water	4,768	901	5,669	13,700	1,113	14,813	10,333	1,041	11,374
Water storage tanks.....	3,374	155	3,529	1,947	74	2,021	5,558	96	5,654
Dams and Irrigation ...	34,293	4,656	38,949	53,328	5,678	59,006	50,818	5,718	56,536
Dams and reservoirs...	23,657	2,138	25,795	37,705	2,376	40,081	32,572	2,260	34,832
Irrigation and land reclamation projects.....	10,636	2,518	13,154	15,623	3,302	18,925	18,246	3,458	21,704
Electric Power	301,183	36,832	338,035	420,121	41,090	461,211	581,720	45,422	627,142
Electric power generating plants, including water conveying and controlling structures.....	115,944	7,874	123,818	193,385	9,555	202,940	318,222	11,059	329,281
Electric transformer stations.....	29,355	4,286	33,641	45,061	4,452	49,513	55,327	4,946	60,273
Power transmission and distribution lines, trolley wires.....	149,254	21,660	170,914	175,625	22,648	198,273	201,334	24,971	226,305
Street lighting.....	6,630	3,032	9,662	6,050	4,435	10,485	6,837	4,446	11,283
Railway, Telephone and Telegraph	143,966	168,592	312,498	202,324	186,538	388,862	228,184	161,930	390,114
Railway tracks and road-bed.....	61,199	133,419	194,618	111,326	141,759	253,085	121,187	119,863	241,050
Signals and interlockers..	1,935	4,349	6,284	3,979	6,075	10,054	4,707	5,436	10,143
Telegraph and telephone lines, underground and marine cables.....	80,772	30,824	111,596	87,019	38,704	125,723	102,290	36,631	138,921
Gas and Oil Facilities ...	311,291	27,813	339,104	504,444	28,520	532,964	639,685	29,849	669,534
Gas mains and services...	12,836	1,540	14,336	32,054	2,276	34,330	43,900	1,947	45,847
Pumping stations, oil...	3,992	955	4,947	3,637	1,189	4,826	8,554	1,352	9,906
Pumping stations, gas...	688	67	755	3,130	32	3,162	5,558	57	5,615
Oil storage tanks.....	15,983	1,822	17,805	20,251	1,306	21,557	26,303	1,151	27,454
Gas storage tanks.....	1,237	390	1,627	2,451	387	2,838	3,642	936	4,578
Oil pipelines.....	21,920	1,344	23,264	29,277	1,294	30,571	30,949	1,507	32,456

9.—Value of Construction Work Performed by Type of Structure 1955-57—concluded

Type of Structure	1955			1956			1957		
	New	Repair	Total	New	Repair	Total	New	Repair	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Gas and Oil Facilities—concluded									
Gas pipelines.....	25,275	1,228	26,503	141,309	899	142,208	241,225	852	242,077
Oil wells.....	143,229	2,915	146,144	185,167	3,905	189,072	165,555	4,478	170,033
Gas wells.....	14,376	229	14,605	14,531	250	14,781	18,462	292	18,754
Oil-refinery processing units.....	69,350	17,134	86,484	58,954	16,794	75,748	66,877	16,839	83,716
Natural gas cleaning plants.....	2,345	189	2,534	13,683	188	13,871	28,660	438	29,098
Other Engineering Construction.....	120,360	39,749	160,109	168,107	51,869	219,976	212,161	51,911	261,072
Bridges, trestles, culverts, overpasses, viaducts....	66,128	20,439	86,567	95,887	28,656	124,543	127,778	27,079	154,857
Tunnels and subways....	2,868	422	3,290	3,761	528	4,289	7,305	885	8,190
Incinerators.....	383	1,281	1,664	615	426	1,041	2,720	378	3,098
Park systems, landscaping, sodding, etc.....	3,176	2,866	6,042	3,327	2,916	6,243	4,637	3,152	7,789
Swimming pools, tennis courts, outdoor recreation facilities.....	924	699	1,623	1,026	731	1,757	1,572	738	2,310
Mine shafts and other below-surface workings.	22,814	2,071	24,885	39,453	2,361	41,814	48,377	2,926	51,303
Fences, snowsheds, signs, guard rails.....	7,565	10,187	17,752	7,320	11,067	18,387	7,408	10,918	18,326
Other engineering construction.....	16,502	1,784	18,286	16,718	5,184	21,902	12,364	5,835	18,199
Totals, Engineering Construction.....	1,458,401	474,423	1,932,824	2,075,712	524,643	2,600,355	2,574,196	520,201	3,094,397
Grand Totals, Construction.....	4,269,694	1,040,935	5,310,629	5,260,319	1,128,513	6,388,832	5,563,371	1,138,701	6,702,072

Principal statistics of the construction industry are shown by province and for contractors, utilities, governments and others in Table 10. The statistics given for Canada as a whole may be considered as relatively accurate but those for individual provinces and by class of builder are approximations only. All estimates given for cost of materials used are based on ratios of this item to total value of work performed, derived from annual surveys of construction work and applied to the total value-of-work figures. Estimates of labour content are similarly based but in addition are adjusted to include working owners and partners and their withdrawals. Although the ratios were calculated in some detail by type of industry, still further refinements are required. There are also some difficulties in obtaining the precise location of projects undertaken or to be undertaken by large companies operating in a number of provinces. However, if used with these qualifications in mind, the table provides useful estimates.

10.—Labour Content, Cost of Materials and Value of Work Performed in Construction, by Province and by Employer 1953-57

NOTE.—Actual 1953-55; preliminary 1956; intentions 1957.

Province and Year	Labour Content		Cost of Materials Used	Value of Work Performed
	Number	Value		
		\$'000	\$'000	\$'000
Province				
Newfoundland.....	1953	9,014	27,799	30,298
	1954	9,778	26,639	30,702
	1955	10,045	28,393	35,796
	1956	10,374	30,136	36,122
	1957	11,689	34,638	44,226

**10.—Labour Content, Cost of Materials and Value of Work Performed in Construction,
by Province and by Employer 1953-57—continued**

Province and Year	Labour Content		Cost of Materials Used	Value of Work Performed
	Number	Value		
		\$'000	\$'000	\$'000
Province—concluded				
Prince Edward Island.....1953	2,022	4,264	7,398	14,222
1954	2,245	4,921	5,900	15,589
1955	2,418	5,359	7,249	17,179
1956	2,281	5,322	7,150	17,172
1957	2,244	5,102	6,950	16,698
Nova Scotia.....1953	20,031	51,490	68,550	141,184
1954	19,049	49,791	62,510	136,018
1955	17,993	48,278	70,308	142,228
1956	17,954	50,150	73,513	147,765
1957	17,683	49,116	70,993	143,087
New Brunswick.....1953	15,439	37,480	52,775	105,227
1954	14,897	38,476	59,795	110,975
1955	19,539	52,249	73,463	154,029
1956	20,281	56,439	79,986	167,162
1957	19,151	53,134	76,200	159,535
Quebec.....1953	135,104	404,631	537,622	1,124,040
1954	135,102	415,441	559,341	1,160,447
1955	132,566	419,834	652,895	1,306,593
1956	146,714	488,882	763,125	1,530,279
1957	150,814	501,958	784,252	1,570,843
Ontario.....1953	173,932	569,627	744,621	1,597,331
1954	183,134	611,897	792,362	1,699,764
1955	187,914	650,722	898,727	1,869,335
1956	209,030	759,958	1,055,248	2,194,020
1957	226,793	825,813	1,155,520	2,398,677
Manitoba.....1953	29,327	81,279	122,620	245,760
1954	27,381	83,796	116,945	240,977
1955	29,275	90,679	123,789	257,433
1956	33,823	109,380	152,222	310,905
1957	37,839	123,540	176,814	359,307
Saskatchewan.....1953	25,476	77,455	114,996	235,195
1954	30,656	100,784	125,626	291,521
1955	27,556	91,677	131,271	280,415
1956	34,353	118,605	168,025	363,086
1957	33,778	116,117	164,722	353,758
Alberta.....1953	50,570	179,335	264,628	556,008
1954	50,934	172,931	247,360	550,258
1955	52,641	187,267	284,402	623,605
1956	59,039	226,063	339,497	747,716
1957	56,005	214,072	321,471	707,837
British Columbia.....1953	54,145	218,030	242,105	552,560
1954	45,010	175,456	194,269	450,446
1955	54,071	212,861	262,924	582,153
1956	71,873	299,882	375,974	829,897
1957	77,855	324,731	407,088	898,063
Totals.....1953	515,060	1,651,390	2,185,613	4,639,615
1954	518,186	1,680,132	2,194,810	4,723,367
1955	534,018	1,787,319	2,540,914	5,310,629
1956	605,722	2,144,817	3,050,862	6,388,832
1957	633,851	2,248,221	3,208,236	6,702,072

10.—Labour Content, Cost of Materials and Value of Work Performed in Construction, by Province and by Employer 1953-57—concluded

Employer and Year	Labour Content		Cost of Materials Used	Value of Work Performed
	Number	Value		
		\$'000	\$'000	\$'000
Employer				
Contractors.....1953	322,889	1,110,446	1,588,109	3,358,410
.....1954	321,525	1,101,370	1,599,498	3,381,630
.....1955	343,322	1,213,022	1,867,575	3,875,878
.....1956	409,287	1,522,051	2,331,803	4,849,493
.....1957	434,514	1,616,976	2,476,498	5,140,743
Utilities.....1953	79,870	233,692	263,128	540,341
.....1954	77,137	243,910	244,013	537,576
.....1955	75,707	239,877	305,097	602,942
.....1956	86,266	285,461	354,318	708,853
.....1957	87,118	288,120	367,533	725,591
Governments.....1953	56,640	148,278	131,529	318,278
.....1954	68,724	179,767	141,983	383,558
.....1955	61,176	167,492	131,285	361,725
.....1956	59,590	173,820	135,471	370,658
.....1957	63,036	184,611	143,424	392,130
Others.....1953	55,661	158,974	202,847	422,616
.....1954	50,800	155,085	209,316	420,603
.....1955	53,813	166,928	236,957	470,084
.....1956	50,579	163,485	229,270	459,828
.....1957	49,183	158,514	220,781	443,608

Subsection 2.—Contracts Awarded and Building Permits Issued

In this Subsection statistics are given of work actually in sight either as contracts awarded or as building permits. These figures are related to those of work performed during the year only so far as the work thus provided for is completed and duly reported in the capital expenditure surveys. Further, values of contracts awarded, and especially of building permits, are estimates (more often under-estimates) of work to be done.

Contracts Awarded.—According to figures published by *Hugh C. MacLean Building Reports*, the Canadian construction industry registered new gains in 1956. Total construction contract awards reached \$3,426,905,500 by the year-end, an increase of 7.6 p.c. over 1955. This gain, however, was not as great as was indicated even as late as mid-summer. Contract volume lagged during the last four months of the year as a result of the deflationary measures imposed by the Federal Government on financial institutions.

During 1956, engineering construction led with a gain of 30.0 p.c. and contributed 31.1 p.c. of the total awards, almost equalling the proportion contributed by residential construction. Industrial work gained 17.9 p.c. and commercial and institutional construction 8.9 p.c. Residential construction was lower by 11.4 p.c. The regional spread of new work was somewhat uneven in 1956. Solid gains were shown in Ontario and Quebec but specific declines in Nova Scotia and New Brunswick brought the Maritime total down from 1955. Also a sharp drop in British Columbia more than counterbalanced gains in the three Prairie Provinces.

11.—Value of Construction Contracts Awarded 1921-56

(SOURCE: *Hugh C. MacLean Building Reports*)

Year	Value of Construction Contracts	Year	Value of Construction Contracts	Year	Value of Construction Contracts
	\$		\$		\$
1921.....	240,133,300	1933.....	97,289,800	1945.....	409,032,700
1922.....	331,843,800	1934.....	125,811,500	1946.....	663,355,100
1923.....	314,254,300	1935.....	160,305,000	1947.....	718,137,100
1924.....	276,261,100	1936.....	162,588,000	1948.....	954,082,400
1925.....	297,973,000	1937.....	224,056,700	1949 ¹	1,143,547,300
1926.....	372,947,900	1938.....	187,277,900	1950.....	1,525,764,700
1927.....	418,951,600	1939.....	187,178,500	1951.....	2,295,499,200
1928.....	472,032,600	1940.....	346,009,800	1952.....	1,812,177,600
1929.....	576,651,800	1941.....	393,991,300	1953.....	2,017,060,700
1930.....	456,999,600	1942.....	281,594,100	1954.....	2,154,959,200
1931.....	315,482,000	1943.....	206,103,900	1955.....	3,183,592,000
1932.....	132,872,400	1944.....	291,961,800	1956.....	3,426,905,500

¹ Newfoundland included from Apr. 1, 1949.

12.—Value of Construction Contracts Awarded by Province and Type of Construction 1952-56

(SOURCE: *Hugh C. MacLean Building Reports*)

Province and Type of Construction	1952	1953	1954	1955	1956
	\$	\$	\$	\$	\$
Newfoundland.....	21,985,300	8,549,700	12,253,700	39,140,200	41,326,300
Prince Edward Island.....	3,489,000	1,254,300	3,899,500	3,157,600	5,482,600
Nova Scotia.....	78,502,000	54,355,800	71,841,400	55,259,600	51,178,300
New Brunswick.....	25,177,000	28,602,000	46,225,300	100,127,200	62,761,900
Quebec.....	397,931,400	539,818,600	538,079,200	778,843,900	988,138,800
Ontario.....	732,768,100	849,812,400	939,746,400	1,300,287,700	1,427,821,300
Manitoba.....	95,690,300	80,455,700	119,828,600	97,164,600	111,526,100
Saskatchewan.....	59,170,000	75,724,400	76,375,200	63,037,200	100,791,700
Alberta.....	231,191,300	215,010,900	219,205,000	230,309,700	275,613,000
British Columbia.....	166,273,200	163,476,900	127,504,900	516,264,300	362,265,500
Totals.....	1,812,177,660	2,017,060,700	2,154,959,200	3,183,592,000	3,426,905,500
Residential.....	511,302,700	732,759,300	900,016,860	1,216,425,100	1,077,408,600
Apartments.....	101,665,300	130,462,400	151,316,400	179,720,400	160,885,200
Residences.....	409,637,400	602,296,900	748,700,400	1,036,704,700	916,523,400
Business.....	528,394,900	613,809,700	694,972,400	761,162,800	823,877,800
Churches.....	26,455,700	32,009,200	44,540,900	37,759,300	40,584,600
Public garages.....	15,958,100	17,298,400	20,798,400	25,748,900	24,983,100
Hospitals.....	56,175,300	69,047,600	62,883,500	77,604,400	63,320,000
Hotels and clubs.....	23,055,600	32,399,800	39,171,000	93,955,400	66,664,200
Office buildings.....	39,640,300	78,035,900	81,715,500	99,842,900	132,488,900
Public buildings.....	149,351,000	111,235,600	120,018,500	102,191,400	108,245,900
Schools.....	130,398,800	119,009,200	169,059,600	174,686,800	205,232,200
Stores.....	41,999,300	81,197,300	76,592,300	93,939,200	92,316,600
Theatres.....	3,116,900	3,075,300	3,069,400	2,221,800	1,617,000
Warehouses.....	40,243,900	70,501,400	77,123,300	53,212,700	93,425,300
Industrial.....	245,851,100	230,925,800	169,650,100	388,410,300	455,579,200
Engineering.....	528,623,900	439,565,900	390,319,900	819,593,800	1,065,039,900
Bridges.....	37,569,700	14,858,700	21,219,300	47,147,300	73,366,500
Marine construction.....	59,257,500	63,592,100	30,649,100	106,319,200	148,134,800
Sewerage and waterworks.....	44,919,300	46,385,500	59,394,600	70,341,900	113,732,900
Roads and streets.....	113,015,000	97,964,200	113,919,500	176,164,600	299,318,200
Power and communications.....	102,856,400	181,420,400	41,015,800	149,696,000	315,651,500
Miscellaneous engineering.....	171,011,000	35,345,000	124,121,600	269,924,800	114,836,000

Building Permits.—The estimated value of proposed construction as indicated by building permits issued in 204 municipalities in 1956 amounted to \$1,318,927,000 as compared with \$1,310,124,000 in 1955 and \$1,151,087,000 in 1954.

13.—Estimated Value of Proposed Construction as Indicated by Building Permits Issued in 204 Municipalities 1955 and 1956

Province and Municipality	1955	1956	Province and Municipality	1955	1956
	\$'000	\$'000		\$'000	\$'000
Prince Edward Island—			Quebec—concluded		
Charlottetown.....	3,819	1,157	St. Joseph d'Alma.....	1,109	2,775
Nova Scotia—			St. Lambert.....	2,889	2,170
Amherst.....	387	434	St. Laurent.....	11,810	15,709
Bridgewater.....	326	326	Shawinigan Falls.....	1,344	3,191
Dartmouth.....	4,289	3,232	Sherbrooke.....	6,755	5,803
Glace Bay.....	184	130	Sorel.....	802	676
Halifax.....	7,591	11,694	Three Rivers.....	4,578	6,163
Liverpool.....	939	233	Val d'Or.....	395	438
New Glasgow.....	..	..	Valleyfield.....	2,950	4,384
New Waterford.....	12	170	Verdun.....	3,221	2,630
North Sydney.....	99	289	Westmount.....	4,289	2,318
Sydney.....	3,138	980	Ontario—		
Sydney Mines.....	55	76	Amherstburg.....	1,478	623
Truro.....	1,048	1,310	Barrie.....	3,774	4,948
Yarmouth.....	172	172	Belleville.....	2,095	1,336
New Brunswick—			Bowmanville.....	710	917
Campbellton.....	2,668	1,057	Bracebridge.....	122	379
Chatham.....	86	1,488	Brampton.....	4,335	3,008
Dalhousie.....	257	269	Brantford.....	6,100	4,567
Fredericton.....	2,999	4,230	Brookville.....	3,397	2,178
Moncton.....	5,187	6,871	Burlington.....	2,097	2,186
Newcastle.....	905	702	Campbellford.....	78	140
Saint John.....	7,192	4,018	Chatham.....	4,658	2,809
St. Stephen.....	36	484	Cobourg.....	2,002	1,555
Quebec—			Cochrane.....	271	271
Cap de la Madeleine....	2,298	3,782	Collingwood.....	409	495
Chicoutimi.....	6,927	4,095	Cornwall.....	2,244	1,775
Coaticook.....	198	167	Dundas.....	2,392	1,482
Drummondville.....	698	2,319	Eastview.....	2,794	3,889
Granby.....	4,424	2,752	Etobicoke Twp.....	56,715	68,621
Grand Mère.....	1,289	3,043	Forest Hill.....	1,447	2,038
Hampstead.....	396	596	Fort Erie.....	772	769
Hull.....	6,852	5,016	Fort Frances.....	1,342	925
Iberville.....	561	801	Fort William.....	5,399	12,130
Joliette.....	2,695	1,675	Galt.....	3,163	3,361
Jonquière.....	2,324	3,443	Gananoque.....	301	712
Lachine.....	7,295	10,126	Gloucester Twp.....	5,347	3,570
Laprairie.....	813	696	Goderich.....	176	695
La Tuque.....	640	2,302	Guelph.....	6,246	5,547
Lévis.....	1,532	1,113	Haileybury.....	133	206
Longueuil.....	1,477	2,022	Hamilton.....	32,892	35,675
Mégantic.....	426	317	Hanover.....	91	163
Montreal (Maisonnette)...	164,111	161,218	Hawkesbury.....	1,133	360
Montreal East.....	3,640	7,034	Huntsbury.....	216	115
Montreal North.....	7,925	9,117	Ingersoll.....	365	835
Montreal West.....	1,576	1,448	Kapuskasing.....	1,085	721
Mount Royal.....	6,671	6,548	Kenora.....	1,486	1,132
Noranda.....	320	872	Kingston.....	9,487	7,856
Outremont.....	1,442	1,012	Kirkland Lake (Teck Twp.).....	429	269
Pointe-aux-Trembles.....	4,624	2,611	Kitchener.....	11,007	14,639
Pointe Claire.....	4,973	7,247	Learnington.....	631	971
Quebec.....	14,312	8,656	Leaside.....	637	2,100
Rimouski.....	1,697	2,460	Lindsay.....	346	705
Rivière-du-Loup.....	560	526	Listowel.....	114	247
Rouyn.....	861	911	Long.....	8,486	8,487
Ste. Agathe-des-Monts.....	168	321	Long Branch.....	2,302	2,151
Ste. Anne-de-Bellevue... St. Hyacinthe.....	143 2,812	561 2,676	Napanee.....	270	256
St. Jean.....	7,573	5,525	Nepean Twp.....	4,583	4,814
St. Jérôme.....	1,359	2,789	New Liskeard.....	476	759
			Newmarket.....	2,364 ¹	1,326
			New Toronto.....	953	1,757
			Niagara Falls.....	1,436	3,389

¹ July to December only.

13.—Estimated Value of Proposed Construction as Indicated by Building Permits Issued in 204 Municipalities 1955 and 1956—Concluded

Province and Municipality	1955	1956	Province and Municipality	1955	1956
	\$'000	\$'000		\$'000	\$'000
Ontario—concluded			Manitoba—concluded		
North Bay.....	5,090	4,051	North Kildonan.....	778	650
North York Twp.....	78,937	78,276	Portage la Prairie.....	2,112	713
Oakville.....	3,276	1,315	St. Boniface.....	5,983	9,914
Orillia.....	1,914	1,119	Selkirk.....	337	1,040
Oshawa.....	13,252	10,192	The Pas.....	215	267
Ottawa.....	57,096	57,514	Transcona.....	2,003	2,998
Owen Sound.....	822	2,615	Winnipeg.....	42,364	29,499
Paris.....	342	227			
Parry Sound.....	409	574	Saskatchewan—		
Pembroke.....	1,439	2,276	Biggar.....	..	153
Perth.....	270	241	Estevan.....	776	2,439
Peterborough.....	6,434	5,418	Melville.....	338	123
Petrolia.....	153	467	Moose Jaw.....	2,977	3,247
Port Arthur.....	5,840	5,090	North Battleford.....	1,537	1,455
Port Colborne.....	1,937	1,709	Prince Albert.....	3,702	3,061
Preston.....	2,319	2,162	Regina.....	24,358	18,368
Renfrew.....	633	1,389	Saskatoon.....	17,617	16,605
Riverside.....	2,756	4,296	Swift Current.....	1,420	2,141
St. Catharines.....	6,548	4,507	Weyburn.....	728	984
St. Mary's.....	512	116	Yorkton.....	887	1,617
St. Thomas.....	1,323	1,847			
Sarnia.....	7,347	7,003	Alberta—		
Sault Ste. Marie.....	4,212	9,049	Calgary.....	58,897	58,960
Scarboro Twp.....	84,829	60,234	Drumheller.....	238	175
Simcoe.....	700	1,457	Edmonton.....	58,719	69,404
Smith's Falls.....	497	192	Lethbridge.....	6,356	7,001
Stratford.....	2,085	2,143	Medicine Hat.....	22,267	4,473
Sudbury.....	3,932	6,470			
Swansea.....	723	2,323	British Columbia—		
Tillsonburg.....	436	814	Chilliwack.....	1,294	1,056
Timmins.....	1,017	798	Cranbrook.....	625	471
Toronto.....	75,982	87,473	Fernie.....	18	49
Trenton.....	1,950	1,442	Kamloops.....	1,140	2,591
Wallaceburg.....	452	720	Kelowna.....	1,676	2,222
Waterloo.....	4,948	4,672	Nanaimo.....	3,076	3,097
Welland.....	1,897	2,250	Nelson.....	464	794
Weston.....	1,063	1,326	New Westminster.....	4,336	3,466
Whitby.....	3,893	1,814	North Vancouver.....	3,984	3,570
Windsor.....	10,553	11,862	Prince George.....	2,842	4,996
Woodstock.....	3,368	3,271	Prince Rupert.....	1,006	718
York Twp.....	12,224	15,040	Revelstoke.....	176	268
York East Twp.....	3,861	3,511	Rossland.....	156	119
			Trail.....	1,205	634
Manitoba—			Vancouver.....	55,446	64,685
Brandon.....	3,651	3,882	Vernon.....	1,035	2,442
Brooklands.....	273	257	Victoria.....	7,181	6,672
Dauphin.....	915	551			
			Totals, 204 Municipalities	1,310,124	1,318,927

Table 14 shows the value of building permits issued in fourteen metropolitan areas across Canada. In 1956 the permits issued in these areas made up 91 p.c. of the total for the 204 municipalities.

14.—Estimated Value of Building Permits Issued in Metropolitan Areas 1955 and 1956

Metropolitan Area	1955	1956	Metropolitan Area	1955	1956
	\$'000	\$'000		\$'000	\$'000
Halifax.....	11,880	14,920	Windsor.....	28,209	28,504
Saint John.....	7,194	4,045	London.....	22,318	21,768
Quebec.....	26,685	26,253	Winnipeg.....	89,176	64,074
Montreal.....	267,616	268,902	Calgary.....	60,371	64,077
Ottawa-Hull.....	79,442	79,333	Edmonton.....	64,438	81,673
Toronto.....	319,674	326,875	Vancouver.....	144,351	138,183
Hamilton.....	60,554	61,655	Victoria.....	17,751	15,999

Tables 15 and 16 show the value and volume of building permits by province for 900 municipalities covering areas in which live about 62 p.c. of the national population and 87 p.c. of the urban population. These figures are useful when appraising the construction activity within, and among, municipalities. Comparisons of construction costs would not be warranted, however, without assurance that structures of similar size and quality were being compared. Despite limited application, this information constitutes one of the few indices of current economic activity in smaller localities.

The relative material was compiled from municipal figures and therefore varies with the terms of individual by-laws, with the methods of estimating the value of local construction and with other factors which may differ from area to area. Information is not available on the permits allowed to lapse without the relative construction being undertaken.

15.—Number of Dwelling Units Covered by Building Permits, by Province 1952-56

Province and Year	Apart-ments	Other	Total	Province and Year	Apart-ments	Other	Total
Newfoundland.....1952	181	619	800	Manitoba.....1952	616	3,962	4,578
1953	27	546	573	1953	685	4,585	5,270
1954	59	486	545	1954	883	4,187	5,070
1955	12	556	568	1955	1,150	4,516	5,666
1956	71	479	550	1956	415	3,584	3,999
Prince Edward Island.1952	3	34	37	Saskatchewan.....1952	117	2,624	2,741
1953	13	40	53	1953	266	3,753	4,019
1954	9	54	63	1954	248	2,912	3,160
1955	14	57	71	1955	462	3,143	3,605
1956	9	42	51	1956	327	2,691	3,018
Nova Scotia.....1952	256	716	972	Alberta.....1952	546	6,801	7,347
1953	943	849	1,792	1953	1,983	8,139	10,122
1954	195	834	1,029	1954	1,353	6,813	8,166
1955	393	777	1,170	1955	738	8,921	9,659
1956	337	791	1,128	1956	641	8,726	9,367
New Brunswick.....1952	92	326	418	British Columbia.....1952	1,156	8,063	9,219
1953	123	651	774	1953	2,124	9,899	12,023
1954	120	508	628	1954	1,855	11,173	13,028
1955	164	635	799	1955	3,134	12,753	15,887
1956	137	824	961	1956	2,897	11,410	14,307
Quebec.....1952	7,036	13,818	20,854				
1953	7,392	19,142	26,534				
1954	7,053	18,070	25,123				
1955	11,083	19,049	30,132				
1956	8,028	18,370	26,398				
Ontario.....1952	5,298	29,738	35,036	Canada ¹.....1952	15,291	67,051	82,348
1953	9,092	34,836	43,928	1953	22,551	82,391	101,948
1954	12,592	36,221	48,813	1954	21,229	81,401	105,630
1955	8,355	43,491	51,846	1955	25,376	93,685	119,061
1956	10,711	33,157	43,868	1956	23,573	80,058	103,631

¹ Provincial totals do not add to the Canada totals because certain minor adjustments could not be distributed provincially.

16.—Value of Building Permits Issued by Province 1952-56

Province and Year	Residential Construction			Non-residential Construction				Total
	New	Repair	Total	Industrial	Com- mercial	Institu- tional and Govern- ment	Other	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	
Newfoundland.....1952	5,518	572	6,090	307	670	1,446	7	8,520
1953	3,736	676	4,412	1,017	737	662	3	6,831
1954	4,141	648	4,789	1,256	1,389	449	4	7,887
1955	4,565	743	5,308	483	1,965	1,077	19	8,852
1956	4,490	742	5,232	446	1,307	1,961	28	8,974
Prince Edward Island 1952	285	25	310	75	144	15	1	545
1953	286	58	344	92	91	75	—	602
1954	409	39	448	73	672	508	—	1,701
1955	520	61	581	240	775	2,584	—	4,180
1956	398	51	449	25	149	725	—	1,348
Nova Scotia.....1952	6,222	1,409	7,631	404	3,181	3,647	95	14,958
1953	9,666	1,656	11,322	3,906	3,466	4,830	13	23,537
1954	6,760	1,424	8,184	1,617	5,180	3,330	46	18,357
1955	8,142	1,494	9,636	1,398	3,358	5,325	40	19,757
1956	8,166	1,730	9,896	2,574	6,490	3,911	37	22,908
New Brunswick.....1952	2,477	1,296	3,773	490	3,851	3,295	4	11,413
1953	5,681	1,257	6,938	1,914	3,058	5,059	1	16,970
1954	4,237	1,056	5,293	1,339	2,148	6,715	16	15,511
1955	5,523	1,364	6,887	1,815	3,949	8,583	43	21,277
1956	7,958	1,661	9,619	1,775	4,408	6,190	1	21,993
Quebec.....1952	125,208	9,184	134,392	18,717	28,046	60,745	1,027	242,927
1953	160,325	11,502	171,827	41,692	30,931	53,699	834	298,983
1954	163,891	13,665	177,556	32,463	28,998	62,011	702	301,730
1955	191,517	15,126	206,643	38,131	50,118	88,126	864	383,882
1956	187,636	16,069	203,705	53,043	69,922	70,548	1,122	398,340
Ontario.....1952	262,579	22,039	284,618	69,594	82,605	61,260	4,000	502,077
1953	350,484	24,373	374,857	111,940	95,877	82,288	4,813	669,775
1954	419,499	22,933	442,432	93,388	86,902	100,767	6,449	729,938
1955	474,454	24,849	499,303	79,078	117,139	96,425	8,648	800,593
1956	425,498	29,375	454,873	100,998	120,350	127,691	6,113	810,025
Manitoba.....1952	26,262	2,247	28,509	1,671	16,312	7,051	74	53,617
1953	34,992	2,262	37,254	5,612	6,417	5,376	80	54,739
1954	39,922	2,076	41,998	8,958	7,545	17,109	133	75,743
1955	46,835	2,758	49,593	12,905	10,796	26,736	76	100,106
1956	38,130	2,707	40,837	5,151	15,238	14,039	205	75,470
Saskatchewan.....1952	17,573	2,080	19,653	809	7,794	5,054	118	33,428
1953	31,565	2,916	34,481	6,446	7,882	15,105	143	64,057
1954	24,930	2,255	27,185	8,201	6,514	13,654	118	55,672
1955	29,615	2,257	31,872	4,252	7,668	13,911	101	57,804
1956	26,923	2,360	29,283	4,216	9,884	10,073	173	53,629
Alberta.....1952	57,939	4,868	62,807	3,464	21,866	10,439	509	99,085
1953	78,175	5,454	83,629	14,149	17,024	19,587	541	134,930
1954	68,126	5,062	73,188	12,378	29,091	32,418	605	147,680
1955	83,403	5,488	88,891	26,415	29,561	31,080	621	176,568
1956	84,388	6,502	90,950	17,559	44,920	34,060	615	188,104
British Columbia....1952	54,180	6,570	60,750	5,036	16,530	10,741	1,262	94,319
1953	75,990	7,697	83,687	13,967	25,037	25,907	1,269	149,867
1954	93,221	7,973	101,194	15,645	18,048	27,742	2,291	164,920
1955	122,425	8,684	131,109	30,768	28,280	36,021	3,213	229,391
1956	118,493	10,185	128,678	35,817	53,559	27,162	1,880	247,096
Canada ¹.....1952	559,098	50,406	609,504	100,570	181,102	164,171	7,051	1,062,398
1953	751,724	58,062	809,726	200,782	190,919	213,261	7,697	1,423,385
1954	826,227	57,295	883,522	175,675	186,540	265,063	10,365	1,521,185
1955	968,025	62,937	1,030,962	195,735	253,544	310,746	13,619	1,804,666
1956	902,084	71,438	973,522	221,601	326,237	296,359	10,171	1,827,850

¹ Provincial totals do not add to the Canada totals because of rounding of the figures and because certain minor adjustments could not be distributed provincially.

The indexes given in Table 17 show as far as possible the fluctuations in building costs and their effect upon construction work and employment. The relative proportions of material and wage costs in general building are difficult to determine since such proportions vary with the type of building and the centres studied.

17.—Value of Building Permits Issued in 204 Municipalities and Index Numbers of the Building Construction Industries 1947-56

Year	Value of Building Permits, 204 Municipalities \$'000	Average Index Numbers (1949=100)			
		Prices of Building Materials		Wage Rates in Construction Industries ¹	Employment in Building Construction ²
		Residential	Non-residential		
1947.....	373,231	79.1	84.5	84.1	81.9
1948.....	536,058	95.4	95.9	95.7	91.4
1949.....	616,161	100.0	100.0	100.0	100.0
1950.....	801,765	106.4	105.0	104.8	104.7
1951.....	681,162	125.5	118.6	118.6	116.0
1952.....	802,738	124.9	123.2	128.6	127.1
1953.....	1,088,880	123.9	124.4	136.2	128.2
1954.....	1,151,087	121.7	121.8	140.0	115.8
1955.....	1,310,124	124.3	123.4	145.4	117.4
1956.....	1,318,927	128.5	128.0	150.7	138.7

¹ Compiled by the Department of Labour, Ottawa.

² As reported by employers.

Section 3.—Housing*

Subsection 1.—Government Aid to House Building

Federal Assistance.—The Federal Government's housing policy has been developed through a succession of Housing Acts. The Government originally entered the housing field in 1919 when, by an Order in Council passed under the War Measures Act of 1918, it made \$25,000,000 available for loans to provincial governments. The provinces in turn lent the money to municipalities for the construction of moderate-cost housing. The first general piece of federal housing legislation was the Dominion Housing Act of 1935. This was succeeded by the National Housing Acts of 1938, 1944 and 1954.

The Federal Government's activities in housing today are defined by the National Housing Act, 1954. Central Mortgage and Housing Corporation, incorporated by Act of Parliament in 1945, administers these activities. The President of the Corporation reports to the Minister of Public Works.

In general, the Federal Government has attempted to stimulate and supplement the market for house building, rather than assume direct responsibilities which rightfully belong to other levels of government or which could more effectively be borne by private enterprise.

More than one-third of the house building in Canada today is aided by the participation of the Federal Government in one way or another.

Insured Mortgage Loans.—To assist the financing of new housing construction, both for home ownership and rental housing, the Corporation insures mortgage loans. These loans are made by banks and other financial institutions which have been approved as lenders under the Act.

The borrower pays an insurance fee. CMHC is the underwriter and all insurance fees remitted by the approved lenders are paid into the Mortgage Insurance Fund. When claims are made on the Fund, the amount paid includes 98 p.c. of the aggregate of the

* Prepared in the Information Division, Central Mortgage and Housing Corporation, Ottawa.

principal owing on the mortgage, approved borrowers' charges and interest, together with an acquisition fee of \$125 and approved taxable legal disbursements. The usual term of an insured mortgage loan is 25 years.

For home ownership, the loans may be 90 p.c. of the first \$12,000 of lending value and 70 p.c. of the remainder. The total loan cannot exceed \$12,800 plus the insurance fee. For rental housing, loans are limited to 80 p.c. of lending value. Maximum loans are prescribed by Order in Council for various types of housing units. Repayment periods, as well as loan proportions, are prescribed in the National Housing Act. There are special provisions for loans to co-operative groups and defence workers. The maximum interest rate for loans is determined by Order in Council and was set at 6 p.c. in January 1957. The interest rate must not exceed the yield on 20-year Federal Government bonds by more than $2\frac{1}{2}$ p.c. at the time it is set.

The Act requires the Corporation to determine lending values of properties, to prescribe minimum standards of construction and to perform compliance inspections during construction. These and other administrative arrangements are included in the National Housing Loan Regulations established by Order in Council.

During 1956, loans were approved for 38,673 units amounting to \$387,757,000; in the first six months of 1957, loans were approved for 12,264 units amounting to \$132,918,000.

Direct Corporation Loans.—The Act authorizes the Corporation to make direct loans for new residential construction in certain cases:—

- (1) Loans in lieu of private loans. The Corporation may make loans directly to prospective borrowers who are unable to obtain loans from a private approved lender. These loans are subject to the same terms and conditions as insured loans. Government policy has directed that, except for defence worker loans, direct loans are not available in metropolitan areas, nor in cities with more than 55,000 population, nor to merchant builders, nor to rental investors.
- (2) Loans to limited dividend companies. The Corporation, with the approval of the Governor in Council, may make a direct loan to a limited dividend company for the construction of moderate- or low-rental housing. Such loans may be up to 90 p.c. of the lending value and may be repayable over a period of up to 50 years.
- (3) Loans to primary producers. The Corporation may make a loan to a company engaged in mining, lumbering, logging and fishing for the construction of a moderate cost rental housing project. Such loans may be up to 80 p.c. of the lending value. The term may not exceed 15 years.

The rates of interest for loans to limited dividend companies and primary producers are established by Order in Council. The interest rate on limited dividend loans is restricted to a rate not exceeding the rate on long-term government bonds plus $\frac{1}{2}$ of 1 p.c. In the case of primary producer loans, the rate must not exceed the bond rate by more than $1\frac{1}{2}$ p.c.

In 1956, 26 loans were approved for 1,620 units to limited dividend companies; their value was \$10,600,000. In the first six months of 1957, 25 loans for 1,190 units totalling \$8,930,000 were approved. Six loans for 290 units totalling \$2,500,000 were approved in 1956 for primary industries and, in the first six months of 1957, five loans for 416 units amounting to \$3,700,000 were approved.

In 1956 other direct loans were approved for 700 units amounting to \$6,300,000 and in the first half of 1957 other loans for 1,969 units totalling \$19,600,000 were approved.

In addition to making direct loans, the Corporation may also supply money to private lenders to make loans on behalf of the Government. No such activity was undertaken in 1956. Arrangements for making such loans, however, were entered into with the approved lenders in September 1957, and over 16,000 units were approved by December 1957.

Purchase and Sale of Mortgages.—The Act provides that any person or company may purchase insured mortgages in Canada, provided that the mortgage is continuously administered by an approved lender. During 1956, 4,922 insured mortgages totalling

\$49,600,000 were sold by lenders. In the first six months of 1957, 2,954 mortgages amounting to \$28,700,000 were sold. The majority of these insured mortgages were bought by pension funds. The Corporation is authorized to buy and sell mortgage loans under both the National Housing Act and the Central Mortgage and Housing Corporation Act but there has been little activity under these provisions.

Home Improvement Loans.—The Corporation provides insurance to banks and installment credit agencies for loans made to home owners for the improvement of property. Fees, which are paid by the borrowers, are deposited in an insurance fund maintained by the Corporation. The Act prescribes the forms of security, the limit of loans upon individual properties and the term of the loan. During 1956, 30,380 loans were approved for a total amount of \$29,700,000. In the first six months of 1957, there were 12,317 loans approved amounting to \$12,258,000.

Federal-Provincial Projects.—Where the Federal Government and a provincial government enter into a partnership agreement, the Corporation may undertake jointly with the province the development of a housing or land-assembly project. Capital costs, profits and losses of such projects are shared 75 p.c. by the Federal Government and 25 p.c. by the province, or jointly by the province and a municipality. Under this legislation two main types of projects are involved: (1) construction of housing units for rental on either an economic or a subsidized basis; and (2) the assembly and servicing of residential lots for sale to prospective home owners and builders.

During 1956 agreements were made for construction of 520 dwelling units in six low-rental housing projects. In the first six months of 1957 agreements were made for 47 units. In 1956 agreements were made for the assembly and servicing of 595 lots in three land-assembly projects. None were made in the first six months of 1957.

Urban Redevelopment.—The Act also provides that where a municipality agrees to acquire and clear a blighted or substandard area with a view to using the site for low-rental housing or for other purposes, a federal grant may be made to the municipality amounting to 50 p.c. of the cost of acquisition and clearance. The area must be substantially residential either before or after redevelopment. The Corporation receives a share of the revenue from the project proportionate to the contributions made.

In 1956 the Federal Government authorized a grant of \$2,467,587 to Montreal to aid in the acquisition and clearance of 20 acres of blighted land. It is proposed that this land be used for a federal-provincial rental project of 800 units. There were no grants made in the first six months of 1957.

Construction Activities.—The Corporation may also carry out construction on its own account or on behalf of Federal Government departments and agencies. It has built projects for the Departments of National Defence, Public Works, Fisheries and Transport and also for Atomic Energy of Canada Limited. During 1956 total expenditures on construction were \$31,600,000. A limited amount of housing is also constructed by other Federal Government departments and agencies for their employees. Often this housing is built in remote areas.

Research and Community Planning.—The Corporation is responsible for undertaking investigations into housing conditions, for sponsoring technical research and for causing the distribution of information leading to the improvement of housing accommodation and the adoption of community plans. The Act provides that the Government can make funds available to the Corporation for these purposes and that, by Order in Council, a grant may be made to a municipality, to an educational or research institution or to an individual. Expenditures of \$694,444 for these purposes were made during 1956. In the first six months of 1957 expenditures of \$175,400 were made.

Guarantees.—The Act provides the following powers which are not at present being used.

- (1) *Guaranteed rental.* Under certain conditions the Corporation is authorized, for a premium, to guarantee returns of private investors from moderate rental housing projects. While this section is technically operative, the related loans are rarely available through the approved lenders, and the Government has instructed the Corporation that direct loans of this type are not to be offered.
- (2) *Lending companies investment.* The Corporation is authorized to offer guarantees to life insurance companies for low-cost or moderate-cost rental housing projects, or to institutional investors for land development. There has been no activity under these headings in recent years.
- (3) *Buybacks.* The Corporation is also authorized to offer purchase guarantees to builders. Guarantees have been offered recently in respect of housing for defence workers, but by Government direction the section is otherwise inoperative.

Other Legislation.—Other Federal legislation in the housing field includes the Canadian Farm Loan Act, 1927, which provides for federal long-term loan assistance for farm housing as well as for other farm purposes; the Veterans' Land Act, 1942, which is administered by the Department of Veterans Affairs and provides loan and grant assistance to veterans for housing and other purposes; and the Farm Improvement Loans Act, 1944, which provides for guarantees for intermediate- and short-term loans made by approved lending agencies to farmers for housing and other purposes.

Provincial Assistance.—All provinces except Prince Edward Island have passed complementary legislation to provide for federal-provincial partnership arrangements for the assembly of land and the construction of low-rent housing as provided in the National Housing Act. The Provinces of Quebec and Ontario have also passed separate housing legislation. In Quebec the "Act to Improve Housing Conditions" (S.Q. 1948, c. 6) and an amendment (S.Q. 1951-52, c. 7) authorize the Province to pay a subsidy on interest charges in excess of 3 p.c. on new dwellings. A further amendment (S.Q. 1953-54, c. 7) increases authorized expenditures under the Act to \$55,000,000 from \$40,000,000.

In Ontario the Housing Development Amendment Act (S.O. 1952, c. 39) authorizes the Province and a municipality to enter into joint housing projects. For industries starting in rural areas and in small communities the Province and municipality may join with Central Mortgage and Housing Corporation in the development of housing projects. Under certain conditions the Province may expropriate land in municipalities for the purpose of housing projects. This Act amended the Housing Development Act (R.S.O. 1950, c. 174).

The Planning Amendment Act (S.O. 1952, c. 75) permits municipalities with an approved official plan to designate an area within the municipality as a redevelopment area and to acquire land in that area and clear and prepare it for residential, commercial, industrial or other designated purpose. This Act amended the Planning Act (R.S.O. 1950, c. 227).

The Rural Housing Assistance Act (S.O. 1952, c. 92) authorizes the establishment of the Rural Housing Finance Corporation, a Crown company which can lend and invest mortgage money in order to provide financial assistance in the building of new houses in villages and rural areas. The Corporation may lend money independently or in co-operation with CMHC or with any approved lending institution.

The Junior Farmer Establishment Act (S.O. 1952, c. 45) establishes the Ontario Junior Farmer Establishment Loan Corporation, which makes loans to assist qualified young farmers in buying, developing and operating their farms. The Corporation may make loans for the construction and improvement of farm houses. Such loans may be secured by a first mortgage on the property. They cannot exceed \$15,000, and are repayable in 25 years.

The Elderly Persons Housing Aid Act (S.O. 1952, c. 27) authorizes the Province to make grants to any limited dividend company to which a loan has been made under the NHA and whose application has been approved by a municipality. The grant amounts to \$500 for each dwelling or 50 p.c. of the capital cost of the project, whichever is the lower. The capital cost excludes the amount covered by the mortgage loan.

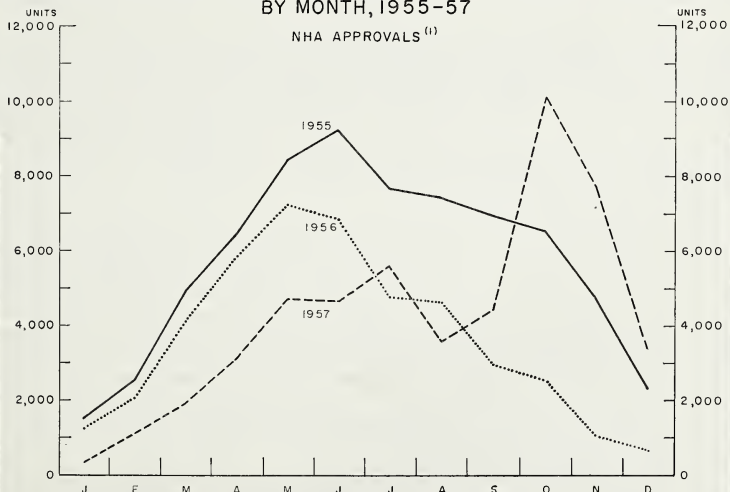
HOUSE CONSTRUCTION STARTS BY MONTH, 1951-57

SEASONALLY ADJUSTED AT ANNUAL RATES



APPLICATIONS APPROVED FOR LOANS UNDER NATIONAL HOUSING ACT, BY MONTH, 1955-57

NHA APPROVALS ⁽¹⁾



(1) INCLUDES CMHC LOANS-DIRECT AND AGENCY

Subsection 2.—Housing Development in 1956-57

House-building activity in 1957, although lower than in the previous year, continued at a high level. Housing starts declined during the first quarter of 1957 but made a substantial recovery during the second quarter. This upward trend continued, though at a more moderate rate, throughout the remainder of the year and it appeared that total starts for 1957 would exceed 120,000 units. The decline from the level of 1956, when 127,000 units were started, was mainly a result of the continued scarcity of mortgage credit.

The shortage of mortgage funds was particularly acute for loans under the National Housing Act. In August 1957, the Government acted to ease the situation and made available \$150,000,000 for loans under the Act for moderately priced housing.

Housing completions, which lag starts by about six months, are expected to number about 117,000 units in 1957. In 1956 completions totalled 136,000, reflecting a carryover of some 79,000 uncompleted units from the record number started in the preceding year.

House-Building Activity.—Housing starts began to decline in the latter part of 1955 but the rate of decline was moderate until the fourth quarter when there was a sharp drop. This decline extended into the first quarter of 1957. A recovery commenced during the second quarter and the upward trend continued throughout the remainder of the year. Virtually all of the decline in housing starts in the two years 1956 and 1957 took place in the urban centres of 5,000 population or over. Starts in other areas were down only slightly. This disparity in the rates of new house building reflects differences in methods of financing such construction. Activity under the National Housing Act is largely concentrated in urban centres. With the shortage of mortgage money having its main impact on loans under the Act, house building in urban centres suffered more than in other areas.

The decline in activity under the National Housing Act was also reflected in the change in the proportion of starts represented by single-family dwellings. Starts of such dwellings represented 72 p.c. of the 1955 total but declined to 68 p.c. during the first nine months of 1957.

Corresponding with the record number of completions, expenditures on new housing construction reached a peak in 1956, amounting to \$1,574,000,000 compared with \$1,499,000,000 in the previous year. The estimated expenditure for 1957 was \$1,416,000,000.

Mortgage Lending.—The reversal during 1956 and 1957 in the upward trend which started in 1953 reflected in large measure shifts in the demand for investment funds. Between 1953 and 1955 capital investment for non-housing purposes showed no increase, mortgage funds for new housing were readily available, and housing starts increased by 35 p.c. From late 1955 to 1957, however, demand for long-term capital for non-housing purposes increased greatly and such investment outlets generally offered higher yields than mortgage loans. The volume of mortgage lending for new housing was reduced, and between 1955 and 1957 housing starts declined by 16 p.c. while investment for non-housing purposes increased by more than 50 p.c.

With the strength of demand for funds for mortgage loans weaker, relative to supply, in 1956 and 1957 than in 1955, mortgage lending by lending institutions declined. During 1956, lending institutions—comprising the chartered banks, life insurance companies, and loan and trust companies—approved mortgage loans for \$997,000,000 which was 17 p.c. below the amount for 1955. In the first six months of 1957, the decline from the previous year was 33 p.c. In both years, mortgage lending under the terms of the National Housing Act suffered the largest decline—in 1956 all of the decline was under the Act. In 1957, mortgage lending on existing housing and on non-residential property also declined. Conventional mortgage lending for new housing showed little change from 1955 to 1957. Starts were held as high as 127,000 in 1956 by virtue of the increase in that part of the housing program financed without the assistance of mortgage loans. Two factors effected the decline in institutional mortgage lending—the rise in interest rates and the position of the chartered banks at the end of 1955.

As competition for the available supply of investment funds increased through 1956 and 1957, interest rates also increased, reaching their highest levels in the postwar period. The maximum rate of interest chargeable on loans under the National Housing Act was

raised in both 1956 and 1957. In March 1956 it was increased by one-quarter per cent to 5½ p.c. and in January 1957 there was a further increase to 6 p.c. Despite these increases, mortgage loans under the Act became less attractive to investors than other forms of investment. During 1957 many of the institutional lenders also experienced a reduction in the rate of growth of their total assets which was reflected in reduced mortgage portfolios.

The chartered banks entered the mortgage-lending field under the National Housing Act of 1954. In that year and in 1955, they were in process of building up their mortgage portfolios, in which they were aided by the relative liquidity of their assets and by the marked asset growth they were experiencing. In 1956 and 1957, however, the growth in the assets of the chartered banks was only moderate and, in addition, they were faced with heavy demands for business loans. As a result, the mortgage-lending activity of the chartered banks, all of it under the National Housing Act, declined by more than 50 p.c. between 1955 and 1956. In March 1957, the Governor of the Bank of Canada received assurances from the chartered banks that they would approve mortgage loans for \$150,000,000 in 1957 an amount that represented little change from 1956.

In August 1957, the Government acted to ease the shortage of funds under the National Housing Act by making available \$150,000,000 for loans under the Act for small homes. The arrangement provided for approved lenders to act as agents of Central Mortgage and Housing Corporation in making the loans.

By mid-November, agency loans in process and approved amounted to over \$132,000,000 and in December a further \$150,000,000 was provided. With a reduced flow of mortgage funds under the Act from private investors, there was an increase in the use of public funds for direct loans, particularly in 1957. Mortgage loans made directly by Central Mortgage and Housing Corporation increased by nearly 200 p.c. from mid-1956 to mid-1957. During 1956 and 1957 loans to limited dividend companies increased over 1955. In 1956 loans were approved for 1,620 rental housing units in limited dividend projects compared with 1,419 units in the preceding year. During the first nine months of 1957 there were approvals for 2,800 units and loans to primary producers were approved for 416 units.

Building Costs.—The costs of housing construction increased by 8 p.c. in 1956 and 6 p.c. in 1957. Most of this increase reflected higher wage costs; building material prices rose in 1956 but changed little in 1957 and land costs continued to advance. In 1956 the average price paid for lots for single-family dwellings financed under the National Housing Act was \$2,041 compared with \$1,819 in 1955. In the first half of 1957, the average price was \$2,254.

In addition to increases in construction and land, higher costs also resulted from an increase in the average size of new dwellings. In housing financed under the Act, average floor areas went up from 1,102 sq. feet in 1955 to 1,138 in 1956 and to 1,169 in the first half of 1957.

As a result of all these changes, average total costs of houses financed under the National Housing Act, including land and construction, went up from \$12,847 in 1955 to \$13,960 in 1956 and \$14,598 in the first half of 1957.

Urban Renewal and Federal-Provincial Projects.—Interest in urban renewal continued to grow throughout 1956 and 1957 and several cities applied to Central Mortgage and Housing Corporation for assistance in carrying out renewal studies. The results of earlier studies were published during 1956-57 by the Cities of Halifax, Winnipeg, Saint John, Toronto and Vancouver.

Construction commenced during 1956 on a 733-unit federal-provincial project in the Regent Park South area of Toronto. This project is being built on a 26-acre site, which is being cleared for redevelopment. Construction also started on a federal-provincial project at Lawrence Heights in Toronto, designed to provide 1,081 dwelling units. Clearing of substandard units from a Montreal downtown area was started in 1957 as part of the plan to renew 20 acres and provide an 800-unit low-rental federal-provincial project.

Housing Design.—During 1956, Central Mortgage and Housing Corporation assisted in the establishment of the Canadian Housing Design Council, an independent body devoted to the promotion of improved housing design. The Council has initiated annual series of regional and national awards for good design in builders' houses.

During 1956 and 1957 the Corporation's architectural division designed, wholly or in collaboration with private firms, permanent married quarters for the Department of National Defence, federal-provincial projects for Regent Park South and Lawrence Heights in Toronto and for St. John's, Nfld., and the Jeanne Mance redevelopment project in Montreal. It also developed plans for the northern towns of Fort Smith, Frobisher Bay, Aklavik, Great Whale River and Tuktoyaktuk, in collaboration with the government departments and agencies concerned.

Housing Statistics.—Tables 18 and 19 show housing starts and completions for 1952-56 and by province and locality for 1956. The numbers of loans approved under the National Housing Act and their amounts for 1952-56 are shown in Table 20.

18.—Housing Units Started and Completed 1952-56, and by Province 1956

Year and Province	Housing Units Started			Housing Units Completed		
	Under the Housing Acts	Other	Total	Under the Housing Acts	Other	Total
	No.	No.	No.	No.	No.	No.
1952.....	34,400	48,846	83,246	20,633	52,454	73,087
1953.....	39,989	62,420	102,409	35,506	61,333	96,839
1954.....	50,373	63,154	113,527	39,137	62,828	101,965
1955.....	65,380	72,986	138,366	58,852	69,077	127,929
1956.....	43,395	83,916	127,311	61,957	73,743	135,700
Province, 1956						
Newfoundland.....	267	1,385	1,652	295	1,215	1,510
Prince Edward Island.....	16	98	114	29	142	171
Nova Scotia.....	675	2,196	2,871	824	1,725	2,549
New Brunswick.....	482	2,899	3,381	653	1,797	2,450
Quebec.....	7,333	28,666	35,999	10,665	30,501	41,166
Ontario.....	21,304	27,408	48,712	31,338	19,863	51,201
Manitoba.....	2,135	3,069	5,204	3,397	3,041	6,438
Saskatchewan.....	1,630	2,149	3,779	2,072	1,531	3,603
Alberta.....	5,440	5,222	10,662	7,043	4,579	11,622
British Columbia.....	4,113	10,824	14,937	5,641	9,349	14,990

19.—Housing Units Started by Locality 1956

Locality	Popu- lation	Under the Housing Acts		Other		Total	
		Started	Per 1,000 Popu- lation	Started	Per 1,000 Popu- lation	Started	Per 1,000 Popu- lation
	'000	No.	No.	No.	No.	No.	No.
Metropolitan Areas—							
Calgary.....	196	2,130	11	1,612	8	3,742	19
Edmonton.....	245	2,356	10	847	3	3,203	13
Halifax.....	160	510	3	679	4	1,189	7
Hamilton.....	326	1,867	6	1,534	4	3,401	10
London.....	153	866	6	504	3	1,370	9
Montreal.....	1,595	4,371	3	14,797	9	19,168	12
Ottawa-Hull.....	335	2,395	7	1,866	6	4,261	13
Quebec.....	301	370	1	2,281	8	2,651	9
Saint John.....	85	129	2	208	2	337	4
St. John's.....	78	77	1	386	5	463	6
Toronto.....	1,348	7,151	5	9,727	7	16,878	12
Vancouver.....	659	2,502	4	5,948	9	8,450	13
Victoria.....	123	321	3	866	7	1,187	10
Windsor.....	184	892	5	505	3	1,397	8
Winnipeg.....	410	2,020	5	1,369	3	3,389	8
Totals, Metropolitan Areas.....	6,198	27,957	4	43,129	7	71,086	11

19.—Housing Units Started by Locality 1956—concluded

Locality	Popu- lation	Under the Housing Acts		Other		Total	
		Started	Per 1,000 Popu- lation	Started	Per 1,000 Popu- lation	Started	Per 1,000 Popu- lation
	'000	No.	No.	No.	No.	No.	No.
Major Urban Areas—							
Brantford.....	58	147	2	159	3	306	5
Chicoutimi-Jonquière.....	88	266	3	389	4	655	7
Fort William-Port Arthur.....	85	211	2	306	4	517	6
Guelph.....	38	217	6	124	3	341	9
Kingston.....	62	229	4	240	4	469	8
Kitchener.....	87	533	6	395	5	928	11
Moncton.....	56	210	4	199	3	409	7
Niagara Falls.....	51	221	4	190	4	411	8
Oshawa.....	72	427	6	258	4	685	10
Peterborough.....	55	259	5	115	2	374	7
Regina.....	89	565	6	446	5	1,011	11
St. Catharines.....	93	555	6	212	2	767	8
Sarnia.....	52	319	6	250	5	569	11
Saskatoon.....	71	728	10	262	4	990	14
Sault Ste. Marie.....	50	213	4	243	5	456	9
Shawinigan Falls.....	59	71	1	301	5	372	6
Sherbrooke.....	67	48	1	281	4	329	5
Sudbury.....	94	289	3	406	4	695	7
Sydney.....	107	45	--	200	2	245	2
Timmins.....	39	3	--	20	1	23	1
Three Rivers.....	81	42	--	367	5	409	5
Totals, Major Urban Areas.....	1,454	5,598	4	5,363	4	10,961	8
Other localities.....	8,429	9,840	1	35,424	4	45,264	5
Canada.....	16,681	43,395	3	83,916	5	127,311	8

20.—Net Loans Approved under the National Housing Acts by Province 1952-56

NOTE.—Figures for 1945-51 will be found in the 1955 Year Book p. 744.

Year and Item	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
1952—												
Loans.....No.	26	9	227	167	4,092	12,336	1,380	307	3,486	1,688	—	23,718
Dwellings....."	27	9	260	182	9,117	16,038	1,916	629	4,056	2,089	—	34,323
Amount.....\$'000	198	64	2,036	1,438	60,538	123,794	13,159	4,533	28,789	14,535	—	249,084
1953—												
Loans.....No.	158	15	410	308	4,684	13,097	1,558	633	3,738	1,913	—	26,514
Dwellings....."	168	16	1,130	333	7,456	18,839	2,050	832	5,464	2,360	—	38,648
Amount.....\$'000	1,279	124	7,813	2,629	55,459	145,129	14,969	6,231	39,593	17,593	4	290,823
1954—												
Loans.....No.	127	16	480	375	6,975	20,422	1,913	884	4,500	3,882	—	39,574
Dwellings....."	166	16	716	391	9,057	26,170	2,540	1,040	5,649	4,344	—	50,119
Amount.....\$'000	1,665	154	6,075	3,372	81,128	240,683	21,813	9,152	49,321	39,418	—	452,781
1955—												
Loans.....No.	343	31	656	496	8,089	29,538	3,006	1,674	6,499	5,813	4	56,149
Dwellings....."	344	33	778	667	10,876	33,498	3,403	1,982	7,057	6,694	4	65,336
Amount.....\$'000	3,560	311	6,869	5,390	97,899	326,657	29,722	17,010	64,766	63,091	37	615,312
1956—												
Loans.....No.	200	12	547	398	5,390	17,466	2,026	1,252	4,899	3,602	2	35,794
Dwellings....."	178	12	650	412	7,105	20,292	2,136	1,528	5,080	3,888	2	41,283
Amount.....\$'000	2,002	124	6,087	3,916	68,205	202,763	19,814	13,544	50,737	39,914	26	407,132

THE CHANGING PATTERN OF CANADA'S HOUSING

Housing is one of the nation's most valuable assets and house building is one of its largest industries. By far the greatest number of houses in a developed country is inherited from the past and the houses built in any year constitute but a fraction of the total stock. The whole character of Canada's cities has been shaped by previous generations and is part of the legacy from the past. Many houses in Canada today are old—nearly one in every ten was built in the 1880's or earlier and more than half a million are from fifty to seventy-five years old.

In every period of national expansion the large amount of new building irrevocably leaves its imprint on the community. The old is torn down to make way for the new, land uses change, and the pattern of each community alters. There is a continual change in the nature of the housing problem. The changes may be less spectacular in some places than in others, but work goes on constantly at the margin of the housing stock. Not only is the face of the old city altered, but new towns come into being.

Each generation has left its mark upon the housing stock but the present generation is destined to leave a major imprint, the result of the massive population growth being experienced and of two factors peculiar to the times—the long-term high level mortgage and the automobile. The first has encouraged the building of single-family homes in large quantity and the second, by increasing people's mobility, has permitted the sprawling suburban development that has become almost synonymous with postwar building.

More than anything else, these two factors can be said to have determined the character of the recent growth in housing. They have brought to the Canadian scene a uniformity in city building which was absent in the past. Until recently, Canadian cities have been recognizably different. Each bore the marks of the particular period in which its greatest expansion occurred. Saint John was notably different from Quebec, Montreal differed markedly from Edmonton or Calgary. In the postwar period, however, all cities have grown together and all bear the character of this newer growth.

At the end of the Second World War the country's housing stock was greatly overburdened. Its growth had been impeded by depression and war, and the demands on the existing supply of houses were intensified by the return of the veterans. Moreover, there were only a small number of contractors and construction workers with any substantial experience in house building, which had seen its last boom in the 1920's, and many building materials were in short supply. By the 1950's, however, this bottleneck had largely disappeared and the introduction of new building techniques, greater use of power equipment and the emergence of large-scale merchant builders helped to increase substantially the industry's capacity.

Curiously enough, even in this period of stringent shortage of accommodation, there was widespread doubt about the effective demand for new housing over the long pull. At the outset, the housing problem was considered simply as one of overcoming the backlog of demand and meeting the needs of returning veterans. In fact, it soon became a question of keeping pace with the current rate of growth in the number of families and in the population generally. Marriages and births during the period far exceeded expectations and there was heavy immigration. In addition there was a persistent drift of persons from farms to cities.

Canada, however, entered the postwar period with some advantages. There was enough land already serviced for building to proceed rapidly, the lenders were anxious to make mortgage loans, and legislation passed immediately before the end of the War enabled prospective home owners to get fairly large loans on comparatively easy terms.

In most urban areas the supply of serviced land at the beginning of the postwar period was substantial. The housing boom of the 1920's had collapsed before meeting the expectations of land developers and many municipalities had extended sewer and water services to areas thought to be in the path of immediate growth. Much of this land lay fallow during the 1930's and through the war years and was available for immediate postwar housing development in the late 1940's.

Mortgage money was not a serious obstacle. The companies providing the bulk of private institutional mortgage funds were peculiarly disposed at the end of the War to look favourably on the mortgage field. They came out of the War with heavy portfolios of low-yield Federal Government securities and greatly reduced mortgage holdings. To the extent that Federal Government bond prices were maintained, these institutions were ready and even anxious to convert them to other investments, including mortgages. Moreover, a ready channel for these funds for mortgage purposes was provided through the National Housing Act, 1944, the principal instrument of government policy in the housing field. This Act made it possible for the borrower to obtain mortgage loans with relatively low down payments, 20- or 25- year amortization and convenient monthly payments in constant amounts. To the lender, the legislation offered an attractive interest return and guarantees against losses that greatly diminished the risk in the event of default. The National Housing Act also contained provision for financing low-rental houses through limited dividend companies, for grants to municipalities undertaking slum clearance projects, for loans to primary industries for the construction of employee dwellings, and it set aside funds to promote research into social, economic and technical housing matters, both by government and outside agencies. Central Mortgage and Housing Corporation was established, by Act of Parliament in 1945, as a Crown agency to administer federal housing policy. A new National Housing Act was introduced in 1954.

Demand remained strong throughout the whole postwar period and, except in the early postwar years, the capacity of the house-building industry and of its suppliers has not limited the output of houses. The limits on house-building, particularly since 1950, have come rather from tightness in the capital market, or from shortage of serviced land or from both. These particular restraints directly reflect the two basic problems of new housing in any period—how much to build and where to build it.

The amount of money invested in mortgages from year to year is subject to the constraint imposed by the total volume of savings available, domestic and imported, and the competing claims for their use. Through the capital market, mortgages and therefore housing must compete for funds with other investment outlets. Important changes were made in the National Housing Act in 1954 to enable mortgage borrowers under the Act to compete more effectively with other borrowers for available funds. The chartered banks of Canada and the Quebec savings banks were empowered to make mortgage loans under the National Housing Act. Furthermore, the guarantees against loss to the lenders were attached to the mortgage rather than to the original lender, so that the resulting mortgage would be more easily negotiable. This was done to facilitate sales of these mortgages so that pools of savings not formerly available for such purposes could serve as a source of mortgage money. Whatever the degree of institutional or individual freedom in the investment of funds, the mortgage market will, however, always be affected by developments in the general capital market, and can never be held free from the effects of business, institutional and government investment in other fields. Shortage of mortgage funds need not always constitute the main immediate limitation on house building, but it has done so over much of the past seven years.

The amount of land ready to receive new housing is also affected by the availability of investment funds. Most residential land in urban Canada today must be served with water and sewer mains and roads and with the attendant trunk lines, arterial traffic routes, and municipal plant and services that these frontage facilities imply. The basic municipal plant and trunk facilities are financed in large measure by the municipality but the cost of fronting services may be financed by the municipality, or may be capitalized in the price of land to the purchaser and paid for with mortgage funds or purchasers' savings. If financed by municipalities or by mortgage lenders, the provision of these services is limited by the constraints of the capital market. If, on the other hand, their costs are met in cash by the purchaser, their market is limited by the availability of liquid assets for down payments.

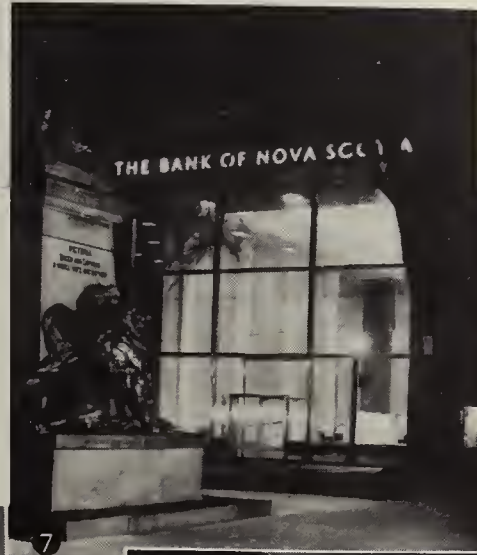
Two factors in recent times have tended to increase the cost of urban services. Canada's postwar housing program has been based largely on demand generated by comparatively easy mortgage-lending terms for home owners. In addition, the private

automobile has made it appear feasible to accommodate large urban populations in single-family houses. As a result, a very great part of postwar residential building in Canada has been in the form of single-family houses for home ownership. More conspicuous than any other feature of the housing stock provided by Canadians in the postwar period has been its spatial extent. It is not merely that the growth has been suburban. Urban growth for the most part has to be suburban. But the suburban growth itself has been prodigal of land. The flatness of Canada's urban growth has not been manifest only in the predominance of single-family houses, but in the concentration on one-storey to the exclusion of one-and-a-half and two-storey houses. Escape from the servicing costs of this kind of development has seldom been sought in a more compact arrangement of houses, but often in a further dispersion of house building to areas where lots are large enough to permit the use of wells and septic tanks in place of piped water supply and sewage disposal.

It is widely believed that this kind of development, by extending unduly the distances over which urban services are provided, raises the costs of new housing both to the owners and to the community. From the point of view of costs, the community may be unable to provide as much new housing in this form as could be built if there were a higher incidence of row houses and other types of multiple accommodation and a less prodigal use of land for single-family dwellings.

The prospects for urban growth in Canada during the next quarter-century point to an even greater development of towns and cities than during the past twelve years. Demand is likely to be sustained for the next ten years and after that to be greatly accelerated by a high rate of family formation and natural population increase. The house-building industry has shown itself capable of increasing its capacity to meet any demands it may face. New techniques are also likely to increase its productivity and through increased competition to improve the product. The critical factors will be the flow of mortgage money and the supply of serviced land. A flexible policy will be necessary to keep in balance the demands for mortgage funds and the claims for other investments. It is estimated that before 1980 about 900 sq. miles will be required to house the new population of Canada's cities.

Recent surveys show that the number of automobiles in use on Canadian highways will continue to increase sharply during the next few decades, but it is too early to foretell the impact of this greater mobility on Canadian living patterns. Equally, the broader mortgage facilities which permit a larger proportion of families to own a home are of comparatively recent origin. In the generality of their use, both are newcomers and their full effects have yet to be seen. Working out the appropriate use of these devices so far as housing is concerned is undoubtedly one of the main problems of the present and the future.



CHAPTER XVII.—SURVEY OF PRODUCTION*

CONSPECTUS

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SECTION 1. INDUSTRIAL DISTRIBUTION OF PRODUCTION.....	736	SECTION 3. PER CAPITA NET VALUE OF PRODUCTION.....	742
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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

The scope of the Survey of Production is limited to industries chiefly engaged in the actual production of commodities. The activities of such industries as transportation, communication, trade, finance and service are excluded, except for certain of their costs that are indirectly reflected in the value of output of the commodity-producing industries; for instance, costs of such business services as insurance, advertising and telephone to the commodity-producing industries are included in the selling or gross value of their products. This is in contrast to the widely used Gross National Product series (*see* Chapter XXV) which encompasses all industries.

In obtaining the "net" value for each commodity industry, the cost of materials, fuel, purchased electricity and process supplies (but not other business services) consumed in the production process is deducted from the selling or gross value of output. The resulting net value of production (or value added) is generally considered more significant as a measure of output than gross value of production and is therefore used in the following analyses and tables.

The measurement of value added is similar, although not strictly comparable, to the concept involved in the contribution of each industry to gross national product at factor cost (net income originating plus depreciation). Apart from variations in the statistical structure the main difference is that value added, as computed for each commodity-producing industry, includes the cost of business services as described above. In national income accounting, the contribution of these services to gross national product at factor cost is classified to the non-commodity industries from which they originate.

One of the major advantages of the commodity-production series is that the statistics may be classified by provinces. With the exception of personal income and its major components, the geographical distribution of gross national product is not available mainly because profits cannot be allocated according to the provinces in which they are generated by productive activity. A more detailed explanation of the series is given in the current, DBS Bulletin *Survey of Production*.

Major revisions made in the statistics of the construction and forestry industries have affected the comparability of the survey of production figures presented here with those presented in earlier editions. A description of these revisions together with revised data is given in DBS Bulletins *Survey of Production 1950-54* and *1951-55*.

* Prepared in the Business Statistics Section, Research and Development Division, Dominion Bureau of Statistics.

Section 1.—Industrial Distribution of Production

Trend in the Period 1950-55.—The total net value of commodity production rose by 46 p.c. between 1950 and 1955. Sustained demand for consumer goods both domestically and abroad, the industrial and resource development programs, and the expansion of defence industries all contributed to this advance, and each of the eight industrial groups showed an increase in value of output in the five-year comparison. The net value of agricultural production in 1955 was \$1,937,000,000, somewhat higher than in 1950, though far below the total for 1951. A much larger wheat crop in 1955 resulted in an increase in value from the low point of 1954. The net value of output of forestry operations was nearly \$665,000,000 in 1955, \$80,000,000 above the 1954 total and 36 p.c. above 1950; the 1955 total, however, was only slightly above the previous peak in 1951. Value of production in the primary fisheries industry for 1955 was \$91,000,000, about 11 p.c. higher than in 1950 but lower than in most intervening years. Quantity of seafish landed fell off in 1955 from the 1954 peak, although prices of fisheries products were slightly higher. Value of output in the trapping industry in 1955 was somewhat above the 1950 level.

Over the review period the net value of production in the mining industry advanced steadily to a record high of \$1,061,000,000 in 1955, more than 61 p.c. above the 1950 level. The volume of fuel production was up 156 p.c., petroleum rising by nearly 350 p.c. Volume of metal output recorded a 24-p.c. gain. Shipments of iron ore were well over four times higher in 1955 than in 1950 and were still rising rapidly. In 1955, when operations in the Labrador area covered the full season for the first time, output of ore was double the 1954 total. Production of non-metals rose by 23 p.c. in the 1950-55 period. The generation of electric power showed an increase of 50 p.c. in the same comparison and, in terms of net value, the industry advanced by over 73 p.c.

The net value of manufacturing production rose fairly steadily over the 1950-55 period—the total of \$8,753,000,000 in 1955 was 47 p.c. above 1950. The value of durable manufactures was up more than 52 p.c. in this comparison, and of non-durables nearly 43 p.c. The former accounted for nearly 48 p.c. of manufacturing net value in 1955 as compared with 46 p.c. in 1950. Non-ferrous metal products advanced 90 p.c. and showed the greatest increase among the durable industries, iron and steel products and transportation equipment increased by about 47 p.c., and wood products by 36 p.c. The net value of non-metallic mineral products increased by over 79 p.c., and value of electrical apparatus by 49 p.c. In the non-durables sector, petroleum and coal products recorded the largest increase of 189 p.c., followed by chemical products and printing and publishing with gains of 67 p.c. and 52 p.c., respectively. By contrast, value of output in the textiles industry showed a fractional decline as compared with 1950 and production of clothing (including knitting mill products) rose by less than 14 p.c.

The construction industry showed the largest proportionate gain of the major commodity industries. The value of net output increased by almost 88 p.c. from \$1,475,000,000 in 1950 to \$2,770,000,000 in 1955, accounted for by a substantial rise in the amount of building activity and by a sharp advance in construction costs. Investment in new construction for 1955 stood at \$3,328,000,000, 82 p.c. above the corresponding figure for 1950. Investment rose steeply in both the residential and the non-residential sectors.

During the period 1950-55, the contribution of secondary commodity output continued to increase, relatively to primary production. In 1955 secondary production (manufacturing and construction) accounted for nearly 73 p.c. of all commodity output as compared with 68 p.c. in 1950. The main factor in this change was the large gain in the contribution of construction which accounted for 17.5 p.c. of all commodity production value in 1955 as compared with 13.6 p.c. in 1950. The share of manufacturing, which was slightly under 55 p.c. in 1950, was virtually unchanged in 1955.

The decline in the contribution of the primary industries from just under 32 p.c. in 1950 to slightly over 27 p.c. in 1955 was entirely accounted for by a drop in agriculture from 17.3 p.c. in 1950 to 12.2 p.c. in 1955. The reduced share of agricultural output during 1954 and 1955 was largely the result of smaller wheat crops.

1.—Net Value of Production by Industry 1950 and 1952-55

NOTE.—Net production represents total value under a particular heading, less the cost of materials, fuel, purchased electricity and supplies consumed in the production process. Data for fisheries and trapping represent total value.

Industry	1950	1952	1953	1954	1955
	\$	\$	\$	\$	\$
Primary Industries¹	3,438,227,063	4,384,743,664	4,140,993,393	3,746,817,841	4,314,884,920
Agriculture ¹	1,883,036,000	2,489,860,000	2,239,227,000	1,665,933,000	1,937,170,000
Forestry ¹	487,119,735	608,482,562	558,795,751	584,337,805	664,664,738
Fisheries.....	82,191,043	92,746,000	89,832,000	97,542,000	90,891,200
Trapping.....	15,204,419	14,137,820	13,221,035	9,839,383	17,423,973
Mining.....	657,328,669	777,443,771	790,596,855	900,609,249	1,061,430,009
Electric power.....	313,347,197	402,073,511	449,320,752	488,556,404	543,305,000
Secondary Industries	7,417,058,229	9,420,236,199	10,447,101,351	10,430,681,137	11,523,165,496
Manufactures.....	5,942,058,229	7,443,533,199	7,993,069,351	7,902,124,137	8,753,450,496
Construction.....	1,475,000,000	1,976,703,000	2,454,032,000	2,528,557,000	2,769,715,000
Totals¹	10,855,285,292	13,804,979,863	14,588,094,744	14,177,498,978	15,838,050,416

¹ Exclusive of agriculture in Newfoundland.

2.—Percentage Analyses of the Net Value of Production by Industry 1950 and 1952-55

Industry	Net Value in— (1949=100)					Percentage of Total Net Production				
	1950	1952	1953	1954	1955	1950	1952	1953	1954	1955
Primary Industries	103.7	132.3	124.9	113.0	130.2	31.7	31.8	28.4	26.4	27.2
Agriculture.....	93.3	123.3	110.9	82.5	95.9	17.3	18.1	15.4	11.8	12.2
Forestry ¹	130.9	163.5	150.1	157.0	178.6	4.5	4.4	3.8	4.1	4.2
Fisheries.....	121.8	137.5	133.2	144.6	134.7	0.8	0.7	0.6	0.7	0.6
Trapping.....	99.4	92.4	86.4	64.3	113.9	0.1	0.1	0.1	0.1	0.1
Mining.....	115.3	136.3	138.6	157.9	186.1	6.1	5.6	5.4	6.3	6.7
Electric power.....	116.0	148.8	166.3	180.9	201.1	2.9	2.9	3.1	3.4	3.4
Secondary Industries	110.7	140.6	155.9	155.6	171.9	68.3	68.2	71.6	73.6	72.8
Manufactures.....	111.5	139.6	149.9	148.2	164.2	54.7	53.9	54.8	55.8	55.3
Construction.....	107.6	144.2	179.0	184.4	202.0	13.6	14.3	16.8	17.8	17.5
Totals	108.4	137.8	145.6	141.5	158.1	100.0	100.0	100.0	100.0	100.0

Current Trend.—The net value of Canadian commodity production during 1955 rose to \$15,838,000,000, nearly 12 p.c. above the 1954 total. All industries except fisheries shared in this advance. Manufacturing and construction accounted for about two-thirds of the over-all increase of \$1,661,000,000 and the primary industries one-third.

Among the major expansionary forces were the rise in personal expenditure on consumer goods and services, the sharp increase in residential construction, and the strong recovery of exports (principally of forestry and mining products) and of business outlays for plant, machinery and equipment. The rise in government expenditures for goods and services, the larger grain crop and the swing in business inventories from liquidation in 1954 to net accumulation in 1955 also contributed to the increase.

Preliminary data for 1956 indicate an increase over 1955 of more than 10 p.c. in the net value of commodity output. This continued strong expansion of economic activity was principally the result of the very large advance of 33 p.c. in business investment outlays for new construction, machinery and equipment. In addition, both consumer expenditures and exports continued to show strong gains as compared with the preceding year. By contrast, investment in residential construction recorded only a small increase. This strength in end-product demand was reflected in the expansion of most commodity-producing industries. Advance data indicate that agricultural output rose by 10 p.c. over 1955, mining production showed an appreciable increase of more than 12 p.c., and the forestry, fisheries and electric power industries recorded some advance over the high levels of 1955. The net value of manufacturing production rose by about 10 p.c. in the same

comparison, accounted for mainly by substantial gains in most durable industries, especially iron and steel products. The construction industry showed the largest increase among the commodity groups in 1956; the net value rose by more than 20 p.c. as compared with 1955.

Advance indicators suggest a levelling off in the net value of production for 1957. During the first nine months of 1957, the index of industrial production averaged only 1.5 p.c. higher than in the corresponding period of 1956; the seasonally adjusted index reached a peak in February and later showed a steadily declining trend. For the first ten months of 1957, the general wholesale price index averaged a little over 1 p.c. above the level for the same period of 1956.

Section 2.—Provincial Distribution of Production

Each province and territory recorded a higher net value of production in 1955 than in 1950. Alberta and British Columbia showed the highest proportionate gains in this comparison. Value of output in Alberta rose by over 73 p.c. during the five years, and value of production in British Columbia by more than 54 p.c. These provinces were followed by Quebec with an increase of 47 p.c., Ontario with 43 p.c., and Saskatchewan with 45 p.c. Advances were more moderate in the other provinces.

Newfoundland.—In 1955 the net value of commodity production in Newfoundland, exclusive of agriculture which is of minor importance in the Province, amounted to nearly \$190,000,000, or about 1.2 p.c. of the Canadian total. Manufacturing accounted for more than 30 p.c. of all commodity production, the products being mainly produced by pulp and paper mills and fish processing plants. Mining followed manufacturing in importance with a contribution of 22 p.c. to provincial output. The principal mineral product is iron ore, which had a greatly expanded output in 1955, and the production of zinc and lead was substantial. Construction also contributed 22 p.c. of Newfoundland's value of commodity production, followed by forestry and primary fisheries.

Prince Edward Island.—The economy of this Province is largely agricultural. Farm output in 1955—principally livestock, potatoes and dairy products—constituted nearly 46 p.c. of the total value of commodity production. Construction contributed 25 p.c. and, together with manufactures, accounted for the bulk of non-farm output. Total net value of production was more than 27 p.c. higher in 1955 than in 1950, and in the later year represented 0.3 p.c. of Canadian commodity production.

Nova Scotia.—The net value of production in Nova Scotia increased nearly 31 p.c. between 1950 and 1955 and accounted for 2.2 p.c. of the national total in the latter year. In 1955, manufactures contributed 40 p.c. of the Province's value of production and primary iron and steel, fish processing, pulp and paper production and shipbuilding were the most important manufacturing industries. Construction accounted for almost 21 p.c. of the Province's total output. Mining and agriculture, Nova Scotia's principal primary industries, contributed approximately 15 p.c. and 9 p.c., respectively, to the 1955 total. Coal mining represented nearly 75 p.c. of the total value of mineral output and dairy products, livestock, poultry and eggs were the principal farm products.

New Brunswick.—The net value of commodity output in New Brunswick recorded a substantial increase in 1955 after declining slightly during the immediately preceding years, and was nearly 22 p.c. above the 1950 total. Over the period, New Brunswick's contribution to the Canadian aggregate fell from 2.3 p.c. to 1.9 p.c. Manufacturing accounted for 40 p.c. of all value of commodity output in 1955, and the main industries were pulp and paper, sawmilling, fish processing and shipbuilding. The primary industries of agriculture and forestry accounted for 13 p.c. and 11 p.c., respectively, of 1955 output. The most important farm products were livestock, dairy items, potatoes and eggs. The net value of construction output increased to make up nearly 27 p.c. of the provincial aggregate in 1955.

Quebec.—In 1955 Quebec's net value of production was \$4,205,000,000, which was nearly 27 p.c. of the total Canadian value of output. The provincial increase during the 1950-55 period was more than 47 p.c. Manufacturing was by far the most important activity; it represented over 62 p.c. of all provincial production. Pulp and paper remained the leading manufacturing industry, contributing about 11 p.c. of total factory output, but non-ferrous metal smelting and refining, clothing, petroleum products, textiles and electrical apparatus were also of major importance. In 1955, agriculture's share of the provincial output fell to less than 8 p.c. as compared with 10 p.c. in 1950; dairy items, livestock and poultry accounted for the greater part of farm production. The construction industry contributed 15.5 p.c. to provincial production as compared with 12.3 p.c. in 1950.

Ontario.—The net value of commodity production in Ontario rose from \$4,544,000,000 in 1950 to \$6,480,000,000 in 1955, a gain of 43 p.c. The Province's contribution to the Canadian total was just under 41 p.c. in 1955 as compared with 42 p.c. in 1950. The economy of Ontario is largely dominated by manufacturing, which represented between 67 p.c. and 70 p.c. of total provincial commodity output throughout the 1950-55 period. Manufacturing industries contributing more than \$100,000,000 to the value of net output in 1955 were, in order of importance: motor vehicles, primary iron and steel, non-ferrous metal smelting and refining, pulp and paper, rubber products, aircraft and parts, motor vehicle parts, petroleum products and heavy electrical machinery. Agricultural output contributed just over 8 p.c. of the Province's value of production in 1955; the principal sources of farm income were: livestock, dairy products, tobacco, poultry, eggs and vegetables. Construction accounted for 15 p.c. of provincial net value of output in 1955 compared with 12.3 p.c. in 1950.

Manitoba.—Manitoba's net value of commodity production rose from \$483,000,000 in 1950 to \$590,000,000 in 1955, a gain of 22 p.c., although the total fluctuated somewhat over the period. Manitoba's contribution to the Canadian aggregate, however, declined from 4.4 p.c. to 3.7 p.c. over the 1950-55 period. The value of farm output in the Province has declined in recent years and manufacturing has displaced agriculture as the Province's dominant activity.

Thus in 1955 manufacturing contributed nearly 42 p.c. of the total value of commodity output. Slaughtering and meat packing, railway rolling-stock and petroleum products were the leading manufacturing industries. Agriculture's share of provincial output, which had been 38 p.c. in 1950, fell to just over 25 p.c. in 1955; grains and livestock were the principal farm products. The value of construction rose sharply during the period and accounted for nearly 23 p.c. of the total value of provincial output in 1955; the comparable figure for 1950 was 15 p.c.

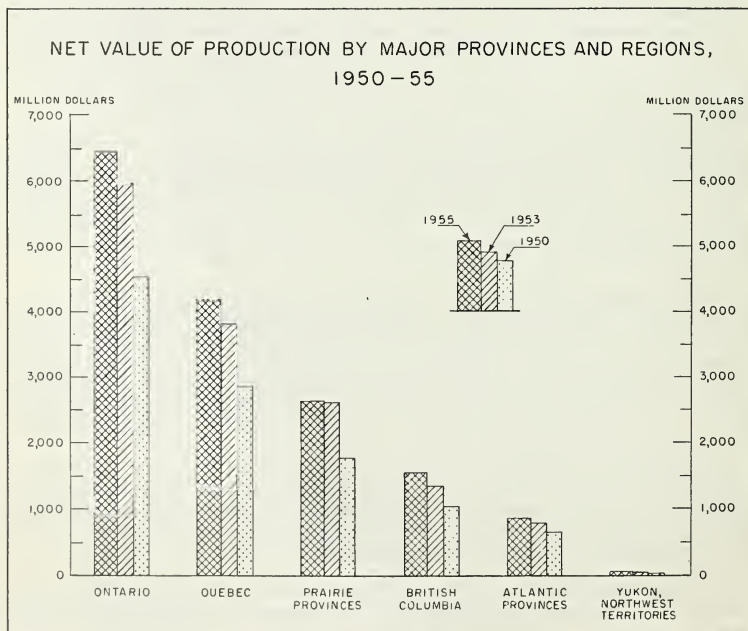
Saskatchewan.—The economy of Saskatchewan is largely dependent upon agriculture and particularly on the wheat crop. The poor yield of 1954 was followed by a fair crop in 1955, and the Province's commodity output rose in that year to \$795,000,000. Although this amount was 45 p.c. above the 1950 output, it was lower than the total value for several of the intervening years. In 1955 Saskatchewan contributed 5.0 p.c. of the Canadian aggregate, almost unchanged from its contribution in 1950 but distinctly less than in the years from 1951 to 1953 when bumper crops were harvested. Agriculture contributed 58 p.c. of the Province's output in 1955.

Manufacturing in the same year represented more than 14 p.c. of the Province's value of production. Petroleum products form the leading industry of Saskatchewan, but slaughtering and meat packing, flour milling, brewing and butter and cheese industries also make significant contributions. The net value of construction was lower than in 1954 and accounted for nearly 19 p.c. of net commodity output.

Alberta.—Alberta's net value of production advanced to \$1,273,000,000 in 1955, more than 73 p.c. above the 1950 total. The Province's contribution to the national aggregate was 8.0 p.c. in 1955, compared with 6.8 p.c. in 1950. Agriculture has declined

in relative importance in Alberta, accounting for slightly over 25 p.c. of provincial output in 1955 compared with 44 p.c. in 1950. The net value of mining output, on the other hand, rose from \$123,000,000 in 1950 to \$304,000,000 in 1955, reflecting primarily the development of Alberta's petroleum resources. The contribution of mining to the provincial total increased from less than 17 p.c. in 1950 to nearly 24 p.c. in 1955. Manufacturing output also rose steadily, accounting for nearly 21 p.c. of the provincial total in 1955 compared with 17 p.c. in 1950. Petroleum refining, slaughtering and meat packing, sawmilling and brewing were the leading manufacturing industries. The dynamic growth of this Province during the 1950-55 period is indicated by the fact that construction accounted for nearly 27 p.c. of the provincial aggregate in 1955 and thus was the leading commodity industry; in 1950 its contribution was 19 p.c.

British Columbia.—The net value of output in British Columbia advanced from \$1,023,000,000 in 1950 to \$1,578,000,000 in 1955, or by 54.2 p.c. In 1955 the Province contributed 10 p.c. of the Canadian total, ranking third among the provinces. Manufacturing continued to account for nearly half the provincial total in 1955, sawmilling heading the list of industries, followed by pulp and paper. Also of importance were veneers and plywoods, petroleum products, fertilizers, fish processing and shipbuilding. Construction accounted for over 20 p.c. of the provincial total in 1955 and was second in value of output. Forestry was third with nearly 17 p.c. and mining fourth. Zinc, lead and copper are the principal mineral products of British Columbia, and lower levels of prices for lead and zinc contributed to a decline in the relative importance of the mining industry since 1952.



3.—Net Value of Production by Province 1950 and 1952-55

NOTE.—Figures for 1950-53 have been revised since the publication of the 1956 edition as a result of changes in the forestry item.

Province or Territory	1950	1952	1953	1954	1955
	\$	\$	\$	\$	\$
Newfoundland ¹	102,811,196	151,070,304	157,415,689	163,905,151	189,777,105
Prince Edward Island.....	31,056,036	42,260,508	34,288,640	37,574,980	39,556,811
Nova Scotia.....	266,817,980	319,858,908	333,690,394	344,953,863	348,963,556
New Brunswick.....	248,114,967	271,424,288	266,700,077	265,572,217	301,500,350
Quebec.....	2,856,012,592	3,628,580,123	3,810,434,557	3,888,597,165	4,205,071,322
Ontario.....	4,544,238,917	5,485,813,501	5,977,076,051	5,812,524,157	6,479,622,022
Manitoba.....	482,568,489	580,066,823	572,582,909	538,994,676	590,478,522
Saskatchewan.....	547,118,176	967,228,965	886,547,107	605,697,656	795,140,719
Alberta.....	735,897,957	1,060,251,662	1,170,742,662	1,117,693,012	1,273,176,313
British Columbia ²	1,023,154,853	1,278,277,196	1,357,028,175	1,364,080,561	1,577,870,127
Yukon and Northwest Territories ²	17,494,129	20,147,585	21,588,483	37,905,540	36,893,569
Canada.....	10,855,285,292	13,804,979,863	14,588,094,744	14,177,498,978	15,838,050,416

¹ Excludes agriculture with British Columbia.

² Construction figures for the Yukon and Northwest Territories are included

4.—Percentages of Total Net Production by Province 1950 and 1952-55

NOTE.—Figures for 1950-53 have been revised since the publication of the 1956 edition as a result of changes in the forestry item.

Province or Territory	1950	1952	1953	1954	1955
	p. c.	p. c.	p. c.	p. c.	p. c.
Newfoundland ¹	0.9	1.1	1.1	1.2	1.2
Prince Edward Island.....	0.3	0.3	0.2	0.2	0.3
Nova Scotia.....	2.5	2.3	2.3	2.4	2.2
New Brunswick.....	2.3	2.0	1.8	1.9	1.9
Quebec.....	26.3	26.3	26.1	27.4	26.6
Ontario.....	41.9	39.7	41.0	41.0	40.9
Manitoba.....	4.4	4.2	3.9	3.8	3.7
Saskatchewan.....	5.0	7.0	6.1	4.3	5.0
Alberta.....	6.8	7.7	8.0	7.9	8.0
British Columbia ²	9.4	9.3	9.3	9.6	10.0
Yukon and Northwest Territories ²	0.2	0.1	0.2	0.3	0.2
Totals.....	100.0	100.0	100.0	100.0	100.0

¹ Excludes agriculture with British Columbia.

² Construction figures for the Yukon and Northwest Territories are included

5.—Net Value of Production and Percentage Analysis by Province 1955

Industry	Newfoundland		Prince Edward Island		Nova Scotia		New Brunswick	
	\$'000	p. c.	\$'000	p. c.	\$'000	p. c.	\$'000	p. c.
Agriculture.....	—	—	18,171	45.9	30,225	8.7	38,375	12.7
Forestry.....	24,295	—	376	0.9	16,052	4.6	32,423	10.8
Fisheries.....	13,661	—	3,279	8.3	23,582	6.7	6,753	2.2
Trapping.....	48	—	2	—	207	0.1	184	0.1
Mining.....	42,625	—	—	—	50,850	14.6	10,405	3.4
Electric power.....	6,698	—	1,367	3.5	16,481	4.7	11,988	4.0
Manufactures.....	60,587	—	6,432	16.3	139,646	40.0	120,808	40.1
Construction.....	41,863	—	9,930	25.1	71,920	20.6	80,566	26.7
Totals.....	189,777	—	39,557	100.0	348,963	100.0	301,560	100.0

5.—Net Value of Production and Percentage Analysis by Province 1955—concluded

Industry	Quebec		Ontario		Manitoba		Saskatchewan	
	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.
Agriculture.....	331,794	7.9	526,895	8.1	149,866	25.4	459,758	57.8
Forestry.....	188,859	4.5	114,483	1.8	6,165	1.1	4,166	0.5
Fisheries.....	3,453	0.1	6,783	0.1	3,477	0.6	763	0.1
Trapping.....	1,750	0.1	4,286	0.1	2,970	0.5	3,715	0.5
Mining.....	233,120	5.5	221,263	3.4	22,545	3.8	45,357	5.7
Electric power.....	170,064	4.0	208,649	3.2	24,340	4.1	18,639	2.4
Manufactures.....	2,622,333	62.4	4,426,655	68.3	247,472	41.9	113,599	14.3
Construction.....	653,698	15.5	970,608	15.0	133,644	22.6	149,144	18.7
Totals.....	4,205,071	100.0	6,479,622	100.0	590,479	100.0	795,141	100.0
	Alberta		British Columbia		Yukon and Northwest Territories		Canada	
	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.
Agriculture.....	322,215	25.3	59,871	3.8	—	—	1,937,170	12.2
Forestry.....	13,163	1.0	264,232	16.7	449	—	664,665	4.2
Fisheries.....	688	0.1	27,711	1.8	742	—	90,891	0.6
Trapping.....	2,078	0.2	774	—	1,410	—	17,424	0.1
Mining.....	303,752	23.8	100,415	6.4	31,098	—	1,061,430	6.7
Electric power.....	28,858	2.3	54,761	3.5	1,462	—	543,305	3.4
Manufactures.....	263,309	20.7	750,877	47.6	1,733	—	8,753,450	55.3
Construction.....	339,113	26.6	319,229 ¹	20.2	1	—	2,769,715	17.5
Totals.....	1,273,176	100.0	1,577,870	100.0	36,894	—	15,838,050	100.0

¹ Construction figures for the Yukon and Northwest Territories are included with British Columbia.

Section 3.—Per Capita Net Value of Production

Between 1950 and 1955, an advance of 46 p.c. in the net value of commodity production was accomplished with a 14.5-p.c. increase in population and an 8-p.c. increase in the labour force. The national per capita net value of commodity output (exclusive of Newfoundland) increased from \$805 in 1950 to \$1,023 in 1955, a gain of over 27 p.c. Wholesale prices rose by less than 4 p.c. in the same period, indicating a substantial gain in 'real' per capita production.

Per capita net value of output in the Maritime Provinces has always been far below the Canadian average and, at \$519, was just over half that figure in 1955. Quebec's per capita production, which was 11 p.c. below the national average in 1950, stood at 9 p.c. below the average in 1955. On the other hand, per capita output in Ontario, consistently the highest among the provinces, was more than 20 p.c. above the national average in 1955.

Manitoba's production per capita was well below the national average throughout the period and, at \$704, was 31 p.c. below this figure in 1955. The figure for Saskatchewan, which fluctuates very widely with crop conditions, was 11 p.c. below the Canadian average in 1955, after rising 18 p.c. above it three years earlier in 1952. Alberta has been well above the Canadian average in this respect in recent years. It exceeded that average by 14 p.c. in 1955 and ranked third in per capita production. British Columbia with its diversified economy always ranks high in per capita output, and in 1955 stood second among the provinces, 15 p.c. above the national figure.

**6.—Per Capita Net Value of Production with Percentage Variation from the
National Average by Province 1950 and 1952-55**

Province	1950		1952		1953		1954		1955	
	Per Capita Net Value	Vari- ation	Per Capita Net Value	Vari- ation	Per Capita Net Value	Vari- ation	Per Capita Net Value	Vari- ation	Per Capita Net Value	Vari- ation
	\$	p.c.	\$	p.c.	\$	p.c.	\$	p.c.	\$	p.c.
Prince Edward Island....	324	-59.8	423	-56.3	339	-66.0	372	-60.5	396	-61.3
Nova Scotia.....	418	-48.1	490	-49.4	503	-49.6	513	-45.5	511	-50.0
New Brunswick.....	485	-39.8	516	-46.8	500	-49.9	492	-47.7	551	-46.1
Quebec.....	720	-10.6	869	-10.3	833	-10.5	886	- 5.8	931	- 9.0
Ontario.....	1,016	+26.2	1,146	+18.3	1,210	+21.2	1,136	+20.7	1,230	+20.2
Manitoba.....	628	-22.0	727	-25.0	708	-29.1	655	-30.4	704	-31.2
Saskatchewan.....	657	-18.4	1,147	+18.4	1,030	+ 3.2	694	-26.2	906	-11.4
Alberta.....	806	+ 1.2	1,090	+12.5	1,157	+15.9	1,057	+12.3	1,167	+14.1
British Columbia ¹	900	+11.8	1,056	+ 9.0	1,083	+ 8.5	1,060	+12.6	1,178	+15.2
Canada².....	865	...	969	...	998	...	941	...	1,023	...

¹ Includes the Yukon and the Northwest Territories.
that Province are not complete.

² Excludes Newfoundland because figures for

CHAPTER XVIII.—LABOUR*

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Section 1.—The Government in Relation to Labour

Subsection 1.—Federal Labour Legislation

The Federal Department of Labour was established in 1900 under the Conciliation Act which provided machinery to aid in preventing and settling labour disputes and required the Department to collect, compile and publish statistical and other relevant information. The Department also assumed the administration of the Fair Wages Policy adopted in the same year for the protection of workmen employed in the execution of Federal Government contracts and on works aided by grants from public funds.

The statutory duty of disseminating information concerning labour and industrial matters is now set out in the Department of Labour Act passed in 1909. In addition the Minister is responsible for the administration of the following statutes: Conciliation and Labour Act (1906); Government Annuities Act (1908)†; Government Employees Compensation Act (1918); Fair Wages and Hours of Labour Act (1935); Unemployment Insurance Act (1940); Vocational Training Co-ordination Act (1942); Reinstatement in Civil Employment Act (1946); Merchant Seamen Compensation Act (1946); Industrial Relations and Disputes Investigation Act (1948); Canada Fair Employment Practices Act (1953); and Female Employees Equal Pay Act (1956). (See also pp. 92-93.)

Fair Wages Policy.—The Fair Wages Policy applying to all Federal Government contracts was first set forth in a Resolution of the House of Commons (1900) and later incorporated in an Order in Council and amended from time to time. Wages and hours on contracts for construction are now regulated by the Fair Wages and Hours of Labour

* Except as otherwise noted, this Chapter has been revised under the direction of A. H. Brown, Deputy Minister, Department of Labour, Ottawa.

† Statistics and details of administration under this Act are given at pp. 274-276.

Act and Order in Council P.C. 2029 of Dec. 22, 1954. Hours of work on construction contracts are limited to eight per day and 44 per week, except in an emergency or in exceptional circumstances where exemption is granted by Order in Council; wages to be paid are those current for the type of work in the district or, if there are no current rates, fair and reasonable rates as determined by the Minister of Labour.

Wages and hours of work on contracts for equipment and supplies are also regulated by Order in Council P.C. 2029. The hours of such work must be those fixed by the custom of the trade in the district where the work is performed, or fair and reasonable hours. The wages must be current or fair and reasonable but in no event shall they be less than those established by statute or regulation of the province in which the work is being performed. This Order in Council contains a clause prohibiting discrimination against any person in matters of employment because of that person's race, national origin, colour or religion, or because he has made a complaint or given information with respect to such alleged discrimination.

*Government Prevailing Rate Employees.**—Twenty-six departments and agencies of government together employ approximately 38,000 (50,000 in summer) non-office workers in public buildings, defence establishments, parks and forests, experimental farms, canal operation, airports and government vessels, survey parties, special projects, etc. Such positions are exempt from the operations of the Civil Service Act and rates of pay are fixed by the Treasury Board in consultation with the Department of Labour on the basis of prevailing private industry rates for comparable work in the employment area. Data used in the determination of these pay rates are secured from wage surveys made by Industrial Relations Officers of the Department of Labour and wage research conducted by the Economics and Research Branch as well as from collective agreements and information supplied by some provincial Departments of Labour.

The Fair Wages Section of the Industrial Relations Branch also recommends rates of pay for 3,700 commissionaires employed by various government departments and agencies throughout Canada, provides wage data to assist certain Crown corporations in the preparation of their wage schedules, and gives assistance in the establishment of class titles, job descriptions and the application of job evaluation techniques.

Three sets of comprehensive Regulations have been established by the Treasury Board governing the hours of work, overtime, vacations, statutory holidays, sick leave, pensions, etc., for (1) prevailing rate workers generally employed; (2) ships' officers, and (3) ships' crews.

The Industrial Relations and Disputes Investigation Act.—This legislation came into effect by proclamation on Sept. 1, 1948, revoking the Wartime Labour Relations Regulations in effect since March 1944 and repealing the Industrial Disputes Investigation Act which had been in force from 1907 until suspended by the Wartime Regulations in 1944. The Act protects proceedings commenced and decisions, orders and certifications made under the wartime legislation in so far as these involve services authorized by the Act.

The Act applies only to industries within federal jurisdiction, viz., navigation, shipping, interprovincial railways, canals, telegraphs, steamship lines and ferries, both international and interprovincial, aerodromes and air transportation, radio broadcasting stations, and works declared by Parliament to be for the general advantage of Canada or of two or more provinces. However, the Act provides that provincial authorities if they so desire may enact similar legislation for application to employees within provincial jurisdiction and make mutually satisfactory arrangements with the Federal Government for the administration of such legislation by the federal authorities.

In general, the Act in its important features provides that employees and employers shall have the right to organize and bargain collectively and that trade unions may be certified as bargaining agents for employee groups. Trade unions and employers are required, upon notice, to bargain collectively in good faith. The Act provides for invoking collective

* Statistics on numbers and earnings of prevailing rate and other groups of federal employees exempt from the Civil Service Act are given on pp. 98-102.

bargaining negotiations and for the mediation of conciliation officers and conciliation boards in reaching collective agreements. Employees may change bargaining agents at times under conditions specified in the Act which also prescribes conditions affecting the duration and renewal of collective agreements. Collective agreements are required to contain provision for the arbitration of disputes concerning the meaning or violation of such agreements and where such provision is lacking application may be made for its establishment. The Act prohibits unfair labour practices, i.e., the interference with or domination of trade unions by employers or interference, discrimination and coercion in trade union activity. The conditions which must be observed prior to strike and lockout action are provided for in the Act. Industrial inquiry commissions may be appointed to investigate industrial matters or disputes.

The Minister of Labour is charged with the administration of the Act, and is directly responsible for the provisions affecting the appointment of conciliation officers, conciliation boards, industrial inquiry commissions, consent to prosecute, and complaints that the Act has been violated or that a party has failed to bargain in good faith.

The Canada Labour Relations Board administers provisions concerning the certification of bargaining agents, the writing of a procedure into a collective agreement for the final settlement of disputes concerning the meaning or violation of such agreement, and the investigation of complaints made to the Minister that a party has failed to bargain collectively.

Detailed statistics concerning activities under the Act may be found in the Annual Report of the Department of Labour. In brief, from Sept. 1, 1948, to Mar. 31, 1957, the Canada Labour Relations Board received 754 applications for certification, 461 of which were granted, 140 rejected, 139 withdrawn and 14 were pending at the end of the period. Of the 428 industrial disputes dealt with under the conciliation provisions of the Act, 358 were settled by conciliation officers and conciliation boards, 41 were not settled, 11 lapsed and 18 were pending at Mar. 31, 1957.

Labour-Management Co-operation Service.—During World War II, production committees based on the principle of joint consultation between labour and management were established in many vital industries. Since 1947 the establishment of labour-management production committees in industry has been encouraged and assisted by the Labour-Management Co-operation Service, a section of the Industrial Relations Branch of the Department of Labour. The number of active committees has grown from 526 in 1947 to approximately 1,100. Their activities are directed towards such objects as better understanding between management and labour, improved production efficiency, improved quality, reduction of waste, accident prevention, good housekeeping, and reduction of absenteeism.

Reinstatement in Civil Employment Act.—This Act provides for the reinstatement in their civil employment of discharged members of the Armed Forces and other designated persons. It was passed in 1946 and is administered by the Department of Labour through the Unemployment Insurance Commission. In 1954, by the Veterans Benefit Act, the Act was made applicable to certain ex-members of the Special Force and to former members of the regular Forces who have served for a period not exceeding three years since July 5, 1950, and prior to July 1, 1955.

Canada Fair Employment Practices Act.—This Act, which came into effect on July 1, 1953, prohibits discrimination in employment based on race, colour, religion or national origin. It applies only to industries within federal jurisdiction—those covered by the Industrial Relations and Disputes Investigation Act (*see* p. 745). This law prohibits acts of discrimination by employers; discrimination by trade unions in regard to membership or employment; the use by employers of employment agencies which practise discrimination; and of advertisements or inquiries in connection with employment which express, directly or indirectly, any limitation, specification or preference as to race, colour, religion or national origin.

Female Employees Equal Pay Act.—This Act came into effect on Oct. 1, 1956, and applies to employers and employees engaged in works, undertakings or businesses coming within federal jurisdiction. The Act, in its principal provision, prohibits an employer from employing a female for any work at a rate of pay that is less than the rate at which a male is employed by that employer for identical or substantially identical work.

Subsection 2.—Provincial Labour Legislation

Labour legislation in Canada is mainly a matter for the provincial legislatures as it usually deals with the contract of service between employer and employee, the contract between members of a trade union which forms the basis of the union, or regulates conditions in local work places. The right to contract is a civil right and the British North America Act, which distributes legislative powers between the Parliament of Canada and the provincial legislatures, grants to the provinces power to enact laws in relation to "civil rights" and, with certain exceptions, "local works and undertakings". In each province a Department of Labour (in Alberta, the Department of Industries and Labour) is charged with the administration of labour laws. Legislation for the protection of miners is administered by departments dealing with mines.

Factory legislation and shops legislation in several of the provinces prohibit child labour, regulate the hours of work of women and young persons and provide for safety and health. Most provinces have minimum wage legislation and maximum hours laws, legislation to ensure freedom of association, to promote collective bargaining and to provide for the settlement of industrial disputes, and legislation dealing with apprenticeship and the licensing of certain classes of workmen. The Industrial Standards Acts of Nova Scotia, New Brunswick, Ontario and Saskatchewan, the Labour Act of Alberta and the Fair Wage Act of Manitoba enable the wages and hours of work agreed upon at a conference of representatives of employers and employees in designated trades to be made the minimum standards throughout the trade concerned. The Quebec Collective Agreement Act permits collective agreements between employers and trade unions to be made binding on all in the industry. The workmen's compensation laws in each province are administered by a board appointed by the Lieutenant-Governor in Council.

Provincial labour legislation enacted in 1956 and 1957 is outlined in the following paragraphs.

Newfoundland.—In 1956 the *Workmen's Compensation Act* was amended to increase the monthly allowances payable to the widows and children of deceased workmen. The allowance to a widow was increased from \$50 to \$60, to a child with one parent from \$12 to \$20, and to an orphan child from \$20 to \$30. The amendment also raised the rate of earnings used in determining compensation in disability cases from 66½ to 75 p.c.

Prince Edward Island.—The *Workmen's Compensation Act* was amended in 1957 to raise the monthly payments to a child living with a parent from \$15 to \$20, and to an orphan child from \$25 to \$30. A further change enables the Board to pay compensation in respect of a child who is over 16 and under 18 years of age at the time of his father's death, in order to assist in furthering his education. Previously, the Board had authority to continue payments for such purpose only if the child had been receiving compensation before the age of 16.

A 1957 amendment to the *Trade Union Act* made the Act apply to employers who regularly employ more than six employees. Formerly, only those with more than 15 employees were covered.

Nova Scotia.—A new *Elevators and Lifts Act* passed in 1956 provides for the licensing and regulation of all passenger and freight elevators and other types of lifts. The Act requires the approval of the Department of Labour before any new installations may be made or any major alterations undertaken. Every elevator or lift must be inspected annually and the Act provides for the appointment of a Chief Elevator Inspector and

an inspection staff who are all required to hold certificates of competency. No elevator or lift may be operated unless it is licensed by the Chief Inspector. Should an accident occur in an elevator or lift, the owner must notify the Chief Inspector within 24 hours. Safety standards with respect to construction, installation and maintenance of elevators and lifts may be set by regulation. The Act is in force from Jan. 1, 1958.

A new *Equal Pay Act*, which was passed in 1956 and became effective on Jan. 1, 1957, forbids an employer to pay a female employee at a lower rate than a male employee for the same work in the same establishment. A difference in the rate of pay between a female and a male based on any factor other than sex does not constitute a failure to comply with the Act. An individual claiming to be aggrieved may make a complaint in writing to a designated officer of the Department of Labour who will inquire into the matter and try to effect a settlement. If he is unsuccessful, the Minister of Labour may appoint a commission to investigate and make recommendations, and may issue an order requiring the commission's recommendations to be carried out. Failure to comply with the order is an offence punishable by a fine on summary conviction.

The *Workmen's Compensation Act* was amended in 1956 to raise the rate of compensation for disability from 66 $\frac{2}{3}$ to 70 p.c. of average earnings. By a further amendment, the minimum amount payable in cases of permanent total disability was raised from \$85 to \$100 a month.

The *Trade Union Act* was amended in 1957 authorizing the Labour Relations Board to refer to the Supreme Court for an opinion on any question which, in the Board's opinion, is a question of law.

An amendment made in 1956 to the *Engine Operators Act* permits a certificate to be issued to a qualified candidate who has been in Canada for at least one year and who has filed a declaration of intention to become a Canadian citizen. Formerly, applicants for certificates were required to be British subjects.

New Brunswick.—A *Fair Employment Practices Act*, passed in 1956 and becoming effective June 1, 1956, forbids discrimination by employers with regard to employment and by trade unions with regard to membership on grounds of race, national origin, colour or religion. Application forms, advertisements, and written and oral inquiries in connection with employment which express any limitation or preference as to race, colour, national origin or religion are prohibited. The Act applies to all employers with five or more employees, and also binds the Crown in right of the Province.

A 1956 amendment to the *Labour Relations Act* brings certain police officers under the Act, and provides that a municipal corporation or police commission which fixes their conditions of employment will be deemed to be an employer under the Act.

By a 1957 amendment, to the *Workmen's Compensation Act*, effective Jan. 1, 1958, the ceiling on earnings was raised to \$4,000 from \$3,000.

Quebec.—The *Workmen's Compensation Act* was amended in 1956 to raise the proportion of earnings on which compensation is based from 70 to 75 p.c., and to reduce the waiting period from seven to five days.

Ontario.—The *Police Act*, which provides for collective bargaining and the settlement of disputes between members of the police force and the employing municipal council, was amended in 1956 to specify time limits for the different steps in bargaining and settlement of disputes by arbitration, and provides that every agreement must contain a provision for the settlement of disputes arising out of an agreement or award. Amendments to the *Fire Departments Act* also set new time limits for collective bargaining and arbitration. A new Section setting out the procedure to be followed when a fire-fighter is dismissed provides that, if the fire-fighter so requests in writing, he must within seven days of receipt of a notice of discharge be given a hearing before the municipal council or a committee of the council.

By a 1956 amendment to the *Workmen's Compensation Act*, effective Jan. 1, 1957, the maximum annual earnings on which compensation is computed were increased from \$4,000 to \$5,000.

The *Department of Labour Act* was amended in 1957 to give the Lieutenant-Governor in Council authority to make regulations for the protection of the health and safety of persons who may be exposed to the effects of ionizing radiation in industry and commerce.

The section of the *Factory, Shop and Office Building Act* that requires the submission of building plans for any proposed factory and for any shop, bakeshop, restaurant or office building of more than two storeys in height was amended in 1957 to require departmental approval of plans of such buildings of less than two storeys, if they are to cover an area of 5,000 or more sq. feet. Certain regulatory measures authorized for factories were extended to shops, bakeshops, restaurants, offices and office buildings, including authorization of the inspector to direct the employer or owner to take remedial measures where he considers any "place, matter or thing" is a source of danger to the health and safety of employees and the public.

Manitoba.—The *Equal Pay Act, 1956*, effective July 1, 1956, forbids an employer to pay male employees on a scale different from that on which wages are paid to female employees working in the same establishment, if the work required of, and done by, employees of each sex is identical or substantially identical. The Act covers employers bound by collective agreements, and prohibits an employer, a trade union or a society acting as bargaining agent for employees from negotiating or entering into a collective agreement providing for scales of wages forbidden by the Act.

The *Labour Relations Act* was amended in 1956 to remove from the application of the Act school teachers who hold certificates or permits under the Education Department Act and who are empowered by a board of school trustees under a written contract in the prescribed form. Provisions were added to the *Public Schools Act*, effective July 1, 1956, setting out a procedure for collective bargaining between school trustees and teachers' associations and for the settlement of disputes by arbitration. Teachers are forbidden to strike.

The *Workmen's Compensation Act* was amended, effective July 1, 1956, to raise from \$3,000 to \$3,500 the maximum amount of average earnings that may be taken into account in computing compensation. The proportion of earnings on which compensation may be based was raised from 70 to 75 p.c. In death cases, the special immediate payment to the widow was increased from \$100 to \$200.

The *Vacations with Pay Act* was amended in 1956 to provide that when a business is sold or merged with another, an employee who continues in the employment of the new owner is, for the purpose of computing the vacation with pay to which he is entitled, to be considered to have been continuously employed by the one employer.

A 1956 amendment to the *Fair Employment Practices Act* forbids the use of discriminatory application forms, unless the request for an answer to the questions concerning such matters as race, national origin, colour or religion, is based upon a *bona fide* occupational qualification. The amendment also provides that the Crown is bound by the Act.

The *Employment Standards Act, 1957*, is a codification and revision of three of the Province's principal labour laws—the *Hours and Conditions of Work Act*, the *Minimum Wage Act* and the *Factories Act*. The new Act consists of four parts: Part I—General, providing for the keeping of records by employers, regulation of home work, control of employment of children, the making of regulations respecting the control of dangerous employments and other matters, special permits and exemptions and enforcement; Part II—Minimum Wages; Part III—Hours and Conditions of Work; Part IV—Safety of Employees in Factories. No significant changes were made in the provisions governing hours of work or in those providing for the fixing of a minimum wage rate. Some important changes were made, however, in the sections dealing with employment of children, 'take-home work' and safety in factories.

Under the general provisions of the Act, the employment of a child under 15 years of age is forbidden, except with a written permit from the Minister, and no child may be employed in such a manner that his safety, health or moral well-being may be adversely affected. Employment in factories of both boys and girls under 15 years of age is prohibited (formerly the prohibition applied to boys under 14 and to girls under 15). Birth certificates are required for the employment of adolescents under 18 years, instead of under 16 as previously. Further, the Lieutenant-Governor in Council may prohibit the employment of boys or girls under 18 (formerly, girls under 18, boys under 16) in a factory in which the work is considered dangerous, unwholesome or unhealthy.

More supervision of 'take-home work' is provided for. An employer intending to give out home work must first register with the Minister, and the Minister, in his absolute discretion, may impose "conditions and limitations" upon the work in so far as remuneration is concerned.

Regulations may be made by the Lieutenant-Governor in Council governing industries that utilize radioactive substances. Factories with fewer than three employees are no longer exempt from the provisions of the Act. There is now a much stronger provision regarding the cleaning of moving machinery. Cleaning or servicing of machinery involving danger to the employee doing the work is prohibited while the machinery is in motion, except with the Minister's written authorization.

Basement factories may be established only with the written permission of the Minister, who may specify the minimum standard of lighting or ventilation, or both, to be provided and lay down other conditions of operation.

The *Steam and Pressure Plants Act* was amended in 1957 to extend its coverage to plants subject to a pressure of 15 lb. p.s.i. or over (rather than 50 lb. p.s.i. as before). Any refrigeration plant or compressed gas plant subject to a pressure of 15 lb. p.s.i. or over must be operated by an engineer holding a certificate of qualification under the *Operating Engineers and Firemen Act*.

Saskatchewan.—The *Workmen's Compensation (Accident Fund) Act* was amended in 1956 to raise from \$4,000 to \$5,000 the maximum earnings that may be taken into account in computing compensation. The immediate lump sum payable to the widow on the death of a workman is increased from \$100 to \$250. Amendments passed in 1957 increased the monthly allowance to a child in the care of a parent from \$25 to \$35 and that payable to an orphan from \$35 to \$45.

The *Fair Employment Practices Act, 1956*, replaces provisions of the *Bill of Rights Act* dealing with discrimination in employment and prohibits discrimination in regard to employment and membership in trade unions by reason of religion, colour, ethnic or national origin. An employer is forbidden to use an employment agency that discriminates on these grounds. The Act adopts the administrative and enforcement procedure which is common to other provincial fair employment practices legislation.

Amendments to the *Minimum Wage Act* in 1956 add to the powers of the Minimum Wage Board in determining minimum wages and certain other working conditions. A 1957 amendment provides that, in recommending the minimum wage to be fixed, the Board may take into account the amount which it deems fair and reasonable, having regard to the wages that it considers to be generally prevailing in the class of employees affected, and the amount which it deems adequate to furnish the necessary cost of living to the employees concerned.

A new *Wages Recovery Act* was passed in 1957 providing for the collection of unpaid wages by making a complaint before a justice of the peace or a police magistrate and authorizing Department of Labour inspectors to collect wages due to an employee. The amendments raise from \$400 to \$500 the maximum amount of wages a magistrate may order an employer to pay.

The *Apprenticeship and Tradesmen's Qualification Act* was amended in 1957 to require an employer carrying on business in a designated trade to keep specified records of employees in his employ. Powers of inspection were also provided for in the amendment.

A new section was added in 1957 to the *Annual Holidays Act* to provide that, where a business is sold, leased, transferred or otherwise disposed of, the service of the employees concerned will, for the purpose of qualifying for vacations, be deemed to be continuous and uninterrupted.

Alberta.—Amendments were made to the *Workmen's Compensation Act* in 1956 incorporating recommendations of a special legislative committee set up in 1955 to investigate the operation of the Act. The monthly compensation payable to a widow was increased from \$50 to \$60. Provision was also made for an increase from \$100 to \$150 in the immediate lump sum payment to the widow on the death of the workman. The monthly payment to dependent children was raised from \$25 to \$30. The rates of all widows' and children's pensions were raised. Compensation is now payable to a child who is over 16 years of age at the time of his father's death, to permit the continuance of his education to age 18. In disability cases the maximum earnings on which compensation may be based are raised from \$3,000 to \$4,000.

Amendments were made to the *Police Act* in 1956 to provide for an appointment of a conciliation commissioner in disputes regarding the remuneration and working conditions of municipal police forces before a dispute goes to arbitration.

Extensive amendments were made in 1957 to the *Alberta Labour Act* which covers hours of work, minimum wages, holidays with pay, industrial standards and labour relations. A new section was added (Part VI) under which an employer is forbidden to pay a female employee at any lesser rate than the rate at which he pays a male employee for identical or substantially identical work. A difference in rates of pay based on any factor other than sex is permissible, however. An employer and employees bound by a collective agreement in force on July 1, 1957, are exempted from the application of the legislation for the duration of the agreement or one year, whichever is shorter. The provisions regarding equal pay are to be administered by the Board of Industrial Relations.

The weekly rest provisions were amended to ensure that an employee is given a day off "immediately following each period of not more than six consecutive days of work". The former wording requiring an employer to grant a day of rest "in each period of seven consecutive days" allowed the employer to give an employee the first day of one week and the last day of the following week.

Every employer who employs eleven or more employees must now give to each employee a written statement for each pay period, showing hours worked, wages at overtime rate, any bonus or living allowance paid and deductions. The employer of fewer than eleven employees must furnish such a statement on request. Under the former provisions an employer was obliged to furnish pay statements only upon request.

British Columbia.—A new *Annual Holidays Act* passed in 1956, effective from July 1, 1957, provides for an annual holiday of two weeks instead of one week and provides a corresponding increase in the rate of vacation pay from 2 p.c. to 4 p.c. of annual earnings.

A new *Fair Employment Practices Act* passed in 1956 forbids employers to refuse to employ, to discharge, or to discriminate against any person because of his race, colour, religion, nationality, ancestry or place of origin. Trade unions are also prohibited from excluding from membership, from expelling or suspending a member or person for any of these reasons. Expressions of discrimination in employment application forms, in advertisements or written or oral inquiries with respect to prospective employment are also banned. The Act does not apply to employers with fewer than five employees, to domestic servants in private homes or to non-profit charitable, philanthropic, educational, fraternal, religious or social organizations. Institutions under the Public Schools Act are covered.

A new *Blind Workmen's Compensation Act* was passed in 1957 providing special protection to employers of blind workmen. Under the Act, where total compensation to a blind workman exceeds \$50, the Workmen's Compensation Board is to be reimbursed from the Consolidated Revenue Fund for the amount in excess of \$50.

Regulation of Wages and Hours of Labour under Industrial Standards Legislation and the Quebec Collective Agreement Act.—The Industrial Standards Acts of Nova Scotia, New Brunswick, Ontario and Saskatchewan and the Labour Act of Alberta provide that wages and hours agreed upon at a conference of representatives of employers and employees, called by the Minister of Labour or his representative, may be made legally binding by Order in Council on the industry in the area concerned. The Nova Scotia Act applies only to construction work at Halifax, Dartmouth and Sydney.

In *Nova Scotia*, 13 schedules of hours and wages for individual building trades were in force during the year ended Mar. 31, 1956, including 12 renewals of previous schedules.

In *New Brunswick*, four schedules for individual building trades were in force during the year ended Mar. 31, 1956.

In *Quebec*, under the Collective Agreement Act, hours and wages and also apprenticeship, vacations with pay and family allowances provisions, established by a collective agreement voluntarily entered into by employers and unions or groups of employees, may be made legally binding by Order in Council on all employers and employees in the industry in the district covered by the agreement, if the parties are sufficiently representative of the industry. At Mar. 31, 1956, 99 agreements covering 225,526 workers and 24,224 employers had been generalized to apply either throughout the Province or to a certain district. The agreements in force throughout the Province apply to the following industries: building materials, the manufacture of women's cloaks and suits, dresses, millinery ladies' handbags, men's and boys' clothing, men's and boys' hats and caps, men's and boys' shirts, fine gloves and work gloves, shoes, furniture, paint, corrugated and uncorrugated paper boxes, the tanning industry and the elevator construction industry. Other agreements concern industries in particular cities or parts of the Province including all building trades and printing trades in large urban centres and many rural districts.

In *Ontario*, there were 149 wages and hours schedules in force at Mar. 31, 1956. Throughout the Province, schedules were in effect for brewery workers, cloakmakers, the men's and boys' clothing industry, men's and boys' hats and caps, the millinery industry and the hard furniture industry. In the construction industry one schedule covered several building trades in one city, and 69 schedules, each for a single trade in a single locality, covered one or more trades in 30 localities. Schedules were in effect in other industries also but only for certain zones: bakers, soft furniture manufacturing, taxi drivers, coal hoisting, and the coal industry, each had schedules in one zone, retail gasoline service in four, taxi drivers in one, and barbers had schedules in 64 zones.

In *Manitoba*, Part II of the Fair Wage Act provides similar machinery for fixing wages and hours in any business, trade or undertaking except agriculture. Orders in Council under this legislation have been passed fixing wages and hours in the barbering and hairdressing trades.

In *Saskatchewan*, 19 schedules were in effect at Mar. 31, 1956. The schedule for barbers covered the whole Province; others applied to bakers and bakery salesmen, carpenters, electrical workers, painters, shoe repairers and beauty culture operators in one or more areas.

In *Alberta*, 26 schedules were in effect during 1956. These governed, in one or more areas, bakers and bakery salesmen, certain individual building trades, dairy employees, garage and service-station workers, radio service, laundry and dry-cleaning employees and barbers.

Regulation of Hours and Annual Holidays.—Five provinces—Ontario, Manitoba, Saskatchewan, Alberta and British Columbia—have statutes that either place absolute limits on working hours or require time and one-half the regular rate to be paid if work is continued after specified limits. There is, in addition, an Act of limited application in Quebec. In the provinces that have no special hours-of-work legislation, the only statutory regulation of hours, apart from that described on p. 752 under the Industrial Standards Acts and the Quebec Collective Agreement Act, is that imposed by factories Acts, mines Acts and, in Newfoundland, an Act governing shops. In New Brunswick and Quebec the limits imposed by the factories Acts apply only to women and boys under 18 years of age. Several minimum wage Acts give authority for the regulation of hours as well as of wages.

In Ontario there is a maximum eight-hour day and 48-hour week with certain exceptions. In Alberta the maximum daily and weekly hours in the cities of Calgary, Edmonton, Lethbridge and Medicine Hat are eight and 44; in the remainder of the Province they are eight and 48. In British Columbia hours are limited to eight in a day and 44 in a week. In these three provinces the Acts apply to most workers except farm labourers and domestic servants. In Saskatchewan the Act requires time and one-half to be paid for work after eight hours daily and 44 hours weekly and applies to workers in all industries except agriculture and domestic service. A Manitoba Act covering most industrial workers in the Province requires time and one-half to be paid for work done after eight hours in a day and after 48 hours in a week for men and 44 hours for women. In all provinces that have Acts regulating hours, longer hours may be worked in an emergency or by permission of the administrative authority.

Six provinces—Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia—have legislation in effect providing for annual holidays with pay for workers in most industries, and New Brunswick has legislation requiring annual holidays in the mining and construction industries. In all these provinces except British Columbia and Saskatchewan, workers are entitled to a one-week holiday with pay after a year of employment. A two-week holiday is given in British Columbia and Saskatchewan after a year of employment, in Alberta after two years and in Manitoba after three. A worker employed for less than a year is entitled, in Quebec, to a half-day for each month of employment and, in Saskatchewan, to one day for each month. Coal miners in Alberta are entitled to a one-day holiday with pay for every 20 days worked in a month but not more than two weeks in a year.

Farm workers are excluded from the holiday provisions in all provinces, and domestic servants in all but Manitoba and Saskatchewan. In addition, Quebec exempts forest operations workers, public corporation employees, salesmen, janitors and watchmen, and certain part-time workers. Ontario exempts professional workers, salesmen, and funeral directors and embalmers. Manitoba and Saskatchewan exempt ranch and market garden employees, and British Columbia exempts professional workers and horticultural workers.

Minimum Wage Regulations.—In Nova Scotia the minimum wage law applies only to women. In Ontario, though the Act applies to both sexes, Orders apply only to women. In Newfoundland, New Brunswick, Manitoba, Alberta and British Columbia there are separate Orders for men and women but in British Columbia most Orders cover both sexes. In Quebec and Saskatchewan all Orders apply to both sexes.

Table 1 shows the minimum rates in effect in September 1957 for several classes of establishment in the principal cities. In Newfoundland, New Brunswick, British Columbia and, with respect to men in Manitoba, the rates set are for the entire Province. Elsewhere rates vary according to zone.

1.—Minimum Wage Rates for Experienced Workers, in Certain Cities, by Sex, September 1957

Item and Type of Establishment	St. John's, Nfld.	Halifax, N.S.	Saint John, N.B.	Montreal, Que.	Toronto, Ont.	Winnipeg, Man.	Regina, Sask.	Edmonton, Alta.	Vancouver, B.C.
Maximum hours per week to which the rates apply.....	48	48	48	48-60 ¹	48	44	44	44	44
	cts. per hour	\$ per week	cts. per hour	cts. per hour	\$ per week	cts. per hour	\$ per week	\$ per week	cts. per hour
Factories.....M.	50	—	65 ²	60	—	60	30	30	75
F.	35	16.80	50	60	22	58	30	28	60
Laundries, etc.....M.	50	—	—	60	—	60	30	30	40
F.	35	16.80	50	60	22	58	30	28	40
Shops.....M.	50	—	—	60	—	60	30	30	65
F.	35	16.80	50	60	22	58	30	28	65
Hotels, restaurants, etc. M.	50	—	—	55 ³	—	60	30	30	65
F.	35	16.80	45	55	22	58	30	28	65
Beauty parlours.....M.	50	—	—	60	—	60	30	30	25.00 ⁴
F.	35	16.80	50	60	22	58	30	28	25.00 ⁴
Theatres and amusement places M.	50	—	—	60	—	60	30	30	18.00 ⁴
F.	35	16.80	50	60	22	58	30	28	18.00 ⁴
Offices.....M.	50	—	—	60	—	60	30	30	75
F.	35	16.80	50	60	22	58	30	28	75

¹ Rates apply to 48 or 54 hours in factories; 48 hours in offices; 54 hours in laundries, shops, beauty parlours and theatres; 60 hours in hotels. ² Applies only to canning or processing of fish, vegetables or fruit. ³ Chauffeurs, watchmen, stationary enginemen and firemen 60 cents; bell boys 35 cents. ⁴ Dollars per week.

Section 2.—The Labour Force*

The current pace of economic activity in Canada necessitates constant planning and study. To the labour leader, the business man, the social administrator and the legislator, this pace requires a continuous process of plan-revision. To provide up-to-date and reliable information concerning the Canadian labour force, a current and periodic analysis of the state of employment in Canada was organized. A labour force survey, on a sample basis, was conducted in the autumn of 1945 and quarterly surveys were carried on until November 1952, when the survey was placed on a monthly basis. A multi-stage area sample was used involving the selection of progressively smaller sample areas and ultimately of households. Random methods of choice were used at every stage of selection so that all members of the population had an equal chance of inclusion. The present sample covers over 35,000 households in more than 115 different areas of Canada; these include 34 cities having a population of 30,000 or over in 1951 as well as some smaller urban centres and various rural areas. The estimates of the labour force are restricted to the civilian labour force; net strength of the Armed Forces is obtainable directly from official sources. Inmates of institutions and Indians living on reserves are excluded.

The labour force surveys provide a classification of persons 14 years of age or over on the basis of their activity during the week that precedes the beginning of the survey, and who had jobs or were seeking work during the survey week. These divisions of the labour force are defined as follows:—

- (1) **Persons with Jobs.**—This category comprises: (a) *persons at work*—those who did any work for pay or profit or who did unpaid work which contributed to the running of a farm or business operated by a relative; and (b) *persons with jobs but not at work*—those who had jobs but did not work because of illness, bad weather, vacation, industrial dispute or temporary layoff with definite instructions to return to work within 30 days of the time of being laid off. Persons who worked part of the survey week and also looked for work are classed as “persons with jobs”.

* Details of the labour force, as defined in the 1951 Census, relative to age, sex and occupation groups, are given in the 1954 Year Book, pp. 692-704.

(2) **Persons without Jobs and Seeking Work.**—This classification includes those persons who were looking for work during the survey week and did not work. Persons who were temporarily away from their jobs during the whole of the survey week seeking other work were considered as without jobs and were included in this category. In addition to those who were actively looking for work, this classification includes persons who would have looked for work, except that they were temporarily ill, were on indefinite or prolonged layoff, or believed that no work was available.

Information relating to the population 14 years of age or over not in the labour force is also collected. Persons not in the labour force include such groups as those going to school or keeping house in their own homes, persons who are permanently unable to work because of old age or other reason, and persons who are retired or voluntarily idle. Persons such as housewives, students and others who worked part time are classed as "persons with jobs" or, if looking for work, they are classed as "persons without jobs and seeking work".

The estimates derived from the labour force surveys are subject to sampling error. In general the percentage of error tends to decrease as the size of the estimate increases. The chances are about 19 out of 20 that the difference between the estimate and the figure which would have been obtained from a complete count is less than that shown below.

<i>Size of Estimate</i>	<i>Sampling Variability</i>
50,000.....	8,000
100,000.....	11,000
500,000.....	25,000
1,000,000.....	33,000
5,000,000.....	54,000

Data in Table 2 for June 1, 1946 to 1957, are compiled from labour force surveys conducted in late May or early June of those years. The information for years before 1946 is taken from estimates based upon 1931 and 1941 Census material rearranged according to the definitional system used in the labour force surveys, the revised census data being linked with the June 1946 survey on the basis of monthly and annual employment and unemployment figures.

2.—Estimates of the Civilian Labour Force and its Main Components, June 1, 1931-57

NOTE.—Figures do not include persons in institutions and Indians on reserves. Figures for 1931-45 inclusive have been revised since the publication of the 1956 Year Book.

Year	Civilian Population (14 years of age or over)	Civilian Labour Force (14 years of age or over)							Persons not in the Labour Force (14 years of age or over)
		Persons with Jobs					Persons without Jobs and Seeking Work	Total Labour Force	
		Non-agriculture			Agri- culture	Total (with jobs)			
		Paid Workers	Other ¹	Total (non-agri- culture)					
	'000	'000	'000	'000	'000	'000	'000	'000	'000
1931.....	7,116	2,028	426	2,454	1,216	3,670	481	4,151	2,965
1932.....	7,240	1,848	385	2,233	1,237	3,470	741	4,211	3,029
1933.....	7,366	1,717	475	2,192	1,257	3,449	826	4,275	3,091
1934.....	7,491	1,931	499	2,430	1,277	3,707	631	4,338	3,153
1935.....	7,621	1,941	538	2,479	1,298	3,777	625	4,402	3,219
1936.....	7,748	1,994	582	2,576	1,319	3,895	571	4,466	3,282
1937.....	7,870	2,108	668	2,776	1,339	4,115	411	4,526	3,344
1938.....	7,997	2,075	632	2,707	1,359	4,066	522	4,588	3,409
1939.....	8,122	2,079	662	2,741	1,379	4,120	529	4,649	3,473
1940.....	8,140	2,197	643	2,840	1,344	4,184	423	4,607	3,533

¹ Employers, 'own account' and unpaid family workers.

**2.—Estimates of the Civilian Labour Force and its Main Components,
June 1, 1931-57—concluded**

Year	Civilian Popu- lation (14 years of age or over)	Civilian Labour Force (14 years of age or over)							Persons not in the Labour Force (14 years of age or over)
		Persons With Jobs				Persons Without Jobs and Seeking Work	Total Labour Force		
		Non-agriculture			Agri- culture			Total (with jobs)	
		Paid Workers	Other ¹	Total (non-agri- culture)					
	'000	'000	'000	'000	'000	'000	'000	'000	
1941.....	8,056	2,566	481	3,047	1,224	4,271	195	4,466	3,590
1942.....	8,085	2,801	494	3,295	1,139	4,434	135	4,569	3,516
1943.....	7,871	2,934	439	3,373	1,118	4,491	76	4,567	3,304
1944.....	7,920	2,976	373	3,349	1,136	4,485	63	4,548	3,372
1945.....	8,048	2,937	366	3,303	1,144	4,447	73	4,520	3,528
1946.....	8,768	2,986	481	3,467	1,271	4,738	124	4,862	3,906
1947.....	8,993	3,139	551	3,690	1,172	4,862	92	4,954	4,039
1948.....	9,123	3,225	543	3,768	1,186	4,954	81	5,035	4,088
1949.....	9,254	3,326	551	3,877	1,114	4,991	101	5,092	4,162
1950 ²	9,610	3,429	561	3,990	1,066	5,056	142	5,198	4,412
1951.....	9,696	3,625	539	4,164	991	5,155	81	5,236	4,460
1952.....	9,919	3,786	516	4,302	927	5,229	106	5,335	4,584
1953.....	10,114	3,837	531	4,368	897	5,265	115	5,380	4,734
1954.....	10,274	3,776	530	4,306	889	5,195	218	5,413	4,861
1955.....	10,506	3,935	516	4,451	873	5,324	213	5,537	4,969
1956.....	10,680	4,156	526	4,682	817	5,499	165	5,664	5,016
1957.....	10,968	4,371	543	4,914	773	5,687	194	5,881	5,087

¹ Employers, 'own-account' and unpaid family workers.

² Newfoundland included from 1950.

Main Characteristics of the Civilian Labour Force, 1946-57.—Since the end of World War II, the civilian population 14 years of age or over (exclusive of persons in institutions and Indians on reserves) has increased by over one-quarter—to an estimated 10,968,000 persons at the beginning of June 1957 from an estimated 8,768,000 persons at the same time of year in 1946. In the same period, the labour force increased by 21 p.c. from 4,862,000 to 5,881,000. The labour force constituted 53.6 p.c. of the population 14 years of age or over in 1957 compared with 55.5 p.c. in 1946. The lower percentage in 1957 is largely accounted for by the fact that the population includes a greater proportion of persons over 65 years of age whose rate of participation in the labour force is much lower than that of the adult population as a whole, and by the fact that young persons are entering the labour force at a higher average age. These factors more than offset the increased proportion of married women with jobs outside the home.

The number of persons with jobs increased by 20 p.c. from 4,738,000 to 5,687,000 over the eleven years. While there has been a continuing decrease in the numbers employed in agriculture, which showed a drop of 39 p.c. in the period, total employment in non-agricultural industries increased 42 p.c. from 3,467,000 at June 1, 1946, to 4,914,000 in 1957. The increase in paid workers in non-agricultural industries was still higher and amounted to 46 p.c. The number of persons without jobs and seeking work fluctuated over the period; at the beginning of June 1957, the proportion of the labour force in this category was 3.3 p.c. and at June 1, 1946, it was 2.6 p.c.

Persons not in the labour force increased by 30 p.c. in the eleven years from 3,906,000 to 5,087,000. The increases were most marked for students and retired persons and were relatively smaller for persons keeping house in their own homes.

Section 3.—Employment, Payrolls and Hours*

Subsection 1.—Historical Commentary

The Dominion Bureau of Statistics has collected monthly data for many years on the numbers of men and women on the staffs of establishments (usually having 15 employees or over) in the main non-agricultural fields, both by industrial classifications and geographical distribution. Motives of economy in time and money exclude the smaller firms. Until 1941, a count of employees at work was made by firms for the last working day in each month. Since early in 1941, when collection of payroll statistics was undertaken, establishments have reported for their last pay periods in each month. Employees, by definition, include wage-earner and salaried staffs, salesmen and commission workers, but exclude proprietors, firm members and directors. The industrial classification includes nine main divisions: forestry—mainly logging; mining; manufacturing; construction; transportation, storage and communication; public utilities; trade; finance, insurance and real estate; and service. All components of these industries are covered by questionnaires except the service classification, in which only hotels, restaurants, laundries and dry-cleaning plants, recreation, business services and a few other groups are surveyed. Such important services as government administration, fishing, agriculture, education, health, domestic and personal service are not covered in the monthly series. Data are published for 32 metropolitan areas and the provinces. Since 1951, the grouping of data has conformed to the Canadian Standard Industrial Classification; statistics for a considerable number of earlier years have been converted to this basis.

From information available in the 1951 Census, it is estimated that 78 p.c. of paid workers at work in the reported industries are covered in the monthly surveys. If all paid workers were taken into account, including those in the non-reported fields and those in small establishments in the industries surveyed, the coverage would approximate 59 p.c. In the broad industrial divisions, estimates of coverage range from a high of 96 p.c. for mining to a low of 40 p.c. for services.

Collected information on labour was expanded in 1941 to include current earnings of the reported employees, and records of weekly payrolls and average weekly wages and salaries were subsequently carried back, on an annual basis, to 1939. Since the autumn of 1944, statistics have also been collected on the hours and earnings of wage-earners for whom establishments can furnish a record of hours actually worked. Monthly statistics on the sex distribution of employees were first published in early 1946, superseding the annual and semi-annual series of immediately preceding years. With the entry of Newfoundland into Confederation, separate data for that Province were recorded from 1950 to 1953; from then on, the statistics have been incorporated into Canada-wide series. The index reference period has been changed several times throughout the years, and the index numbers are now computed on the 1949 average as 100. The data currently compiled for manufacturing have been supplemented for a considerable number of years by a detailed annual inquiry into the earnings and hours of work of men and women wage-earners and salaried employees. More information on this survey will be found in Subsection 3, pp. 766-774.

Employment in the surveyed industries in 1956 was just about double the 1939 figure. The index was computed at 60.1 for 1939 and, reflecting steady population growth and greater industrialization, climbed to 120.1 in 1956. In the same period the annual average of weekly wages and salaries for the reporting industries showed uninterrupted advances: the industrial composite of average weekly earnings was \$23.44 in 1939 and increased to \$64.18 in 1956, a gain of 174 p.c. In manufacturing, earnings increased to a rather greater extent—from \$22.79 in 1939 to \$66.47 in 1956, or 192 p.c., reflecting a pronounced expansion in employment in the heavy manufacturing industries in which earnings were above the general average.

* Prepared in the Employment Section, Labour and Prices Division, Dominion Bureau of Statistics.

Since the end of 1944, a monthly statistical series has been maintained for manufacturing and a few other industries, showing average hours and average hourly and weekly wages for wage-earners for whom employers keep records of hours actually worked. In 1945, the annual average of hourly earnings in factories was 69.4 cents, and each succeeding year experienced a step-up until a high of 151.5 cents was reached in 1956. Other industries in which payment by the hour is typical followed the same upward trend. For example, the average in construction advanced from 73.5 cents an hour in 1945 to a new peak of 163.9 cents in 1956. Increases in hourly earnings were attended by decreases in the average hours worked in most reporting industries. In manufacturing, the average weekly hours fell from 44.3 in 1945 to 41.1 in 1956.

3.—Annual Average Index Numbers of Employment by Industrial Group 1947-56 and Monthly Indexes 1955 and 1956

NOTE.—These indexes are calculated as at the first day of each month, on the base 1949=100.

Year	Forestry (chiefly log- ging)	Mining	Manu- factur- ing	Con- struc- tion	Trans- porta- tion, Storage and Communi- cation	Public Utility Opera- tion	Trade	Finance, Insur- ance, Real Estate	Serv- ice ¹	Indus- trial Compo- site
Averages —										
1947.....	149.6	88.6	97.2	85.6	95.4	76.7	90.2	91.5	94.6	95.7
1948.....	138.4	97.2	100.1	95.4	99.0	89.0	96.3	96.0	99.1	99.7
1949 ²	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1950.....	100.8	105.5	100.9	102.4	99.9	101.3	103.2	105.4	101.0	101.5
1951.....	138.6	110.6	108.0	110.2	106.1	103.4	107.4	115.2	103.1	108.8
1952.....	123.9	116.8	109.3	122.5	110.9	107.5	109.9	121.9	106.6	111.6
1953.....	100.0	111.7	113.3	118.6	111.3	112.1	113.2	122.4	108.7	113.4
1954.....	95.1	109.8	107.7	110.7	109.0	115.7	114.6	127.4	111.4	109.9
1955.....	101.8	113.4	109.3	114.9	110.5	118.9	118.1	132.0	114.5	112.5
1956.....	113.3	122.0	115.4	130.8	117.7	125.7	125.5	136.4	124.4	120.1
1955—										
Jan. 1.....	122.2	110.8	103.2	104.2	107.7	116.5	121.9	130.9	109.3	109.1
Feb. 1.....	106.6	110.2	103.6	91.1	104.3	113.2	112.7	131.2	108.6	105.8
Mar. 1.....	92.5	110.0	105.7	87.0	103.6	113.4	111.7	131.2	108.0	105.6
Apr. 1.....	68.3	110.0	106.5	88.3	104.3	113.4	112.8	131.6	108.6	105.7
May 1.....	54.0	109.0	107.3	99.2	107.7	114.8	114.8	131.7	111.0	107.4
June 1.....	81.5	111.9	109.3	115.2	111.4	119.1	116.9	132.3	113.7	111.7
July 1.....	101.3	115.5	111.6	125.8	113.9	123.3	118.1	132.7	118.6	115.3
Aug. 1.....	98.3	116.5	111.4	132.2	115.9	124.5	117.7	133.6	121.2	116.1
Sept. 1.....	104.5	117.4	114.0	138.9	116.0	125.8	118.2	133.8	121.6	118.3
Oct. 1.....	119.7	116.5	113.4	138.2	115.1	121.9	121.5	131.7	119.6	118.5
Nov. 1.....	133.8	116.6	112.8	134.0	113.6	120.5	123.5	131.9	117.9	118.2
Dec. 1.....	139.5	116.5	112.3	125.2	112.7	120.1	127.8	132.0	116.3	117.9
1956—										
Jan. 1.....	134.4	114.4	109.8	105.1	111.3	119.8	129.0	132.0	115.4	114.6
Feb. 1.....	115.6	114.4	110.2	102.9	109.4	119.3	119.1	132.3	115.2	112.3
Mar. 1.....	109.5	115.9	112.3	101.9	110.0	118.6	118.7	133.9	115.9	113.2
Apr. 1.....	84.2	117.3	113.4	101.4	111.2	118.4	121.1	134.6	117.8	113.5
May 1.....	66.6	116.9	114.1	115.0	114.3	121.4	122.0	135.1	120.1	115.2
June 1.....	95.2	123.0	115.4	133.1	118.5	125.2	124.0	135.6	124.7	119.7
July 1.....	112.2	126.1	118.0	151.5	121.3	128.8	126.0	136.8	130.9	124.2
Aug. 1.....	114.0	128.2	117.9	156.3	124.9	132.0	125.2	137.5	134.4	125.4
Sept. 1.....	116.8	128.6	118.0	156.6	124.7	134.4	125.8	137.7	134.4	125.7
Oct. 1.....	127.2	126.5	118.6	152.2	123.2	131.3	129.4	140.5	129.0	125.9
Nov. 1.....	137.9	126.9	118.6	151.5	121.9	129.9	131.1	140.4	127.8	126.2
Dec. 1.....	145.8	125.4	118.0	142.5	121.5	129.2	135.0	110.5	126.8	125.7
Percentage distribution in 1956³.....										
	2.9	4.0	44.2	9.7	13.4	1.9	14.9	4.7	4.3	100.0

¹ Consists mainly of hotels, restaurants, laundries, dry-cleaning establishments and business and recreation service.

² Newfoundland included from 1949.

³ The proportion of employees reported in the industries to the total reported by all employers making returns in Canada (12-month average).

Subsection 2.—Employment and Earnings in 1956

During 1956, exceptional economic advances were made in Canada. Expenditure by consumers on goods and services rose 8 p.c. and exports were up 12 p.c. over 1955. The developments were reflected in higher levels of employment, payrolls and per capita earnings. The annual average employment index (1949 = 100) reached a new high at 120.1, up 6.8 p.c. from 1955, and considerably above the previous peak of 113.4 set in 1953. The rate of increase from the previous year had been surpassed only in 1947 and 1951 during the postwar period. All major industrial divisions surveyed monthly, except logging, shared in the advance, employment rising to new peaks. In forestry, however, an 11-p.c. increase over 1955 did not suffice to bring the 1956 index up to the all-time high in 1947. The 13.8-p.c. increase for the construction industry was the greatest gain of the year. In other industries, the increases ranged from a high of 8.6 p.c. for services to a low of 3.3 p.c. for the finance, insurance and real estate group.

Manufacturing, which reports approximately 45 p.c. of all employees covered in the monthly surveys, rose by 5.6 p.c. over 1955. The expansion in the durable goods segment of this industry continued at a faster rate than in the non-durable goods group, the employment increases over 1955 amounting to 7.8 p.c. and 3.4 p.c., respectively. Iron and steel products recorded a 9.6-p.c. jump in staffs over the preceding year. There was a rise of at least 5 p.c. in each of the individual industries except agricultural implements, in which case a lack of export and domestic orders resulted in an employment decrease of 10.2 p.c. The most notable increases in the durable goods branch were in fabricated and structural steel, primary iron and steel, iron castings and machinery manufacturing, ranging from 12 to 19 p.c. Increased activity in motor vehicle and railroad and rolling-stock equipment was largely responsible for a considerable rise in transportation equipment. There were also noteworthy gains in electrical apparatus and supplies, non-metallic minerals, and aluminum products groups. Declines in employment continued in fur goods and hats and caps, while staffs in synthetic textiles and silk, tobacco and tobacco products, grain mill products and canned and cured fish were also smaller than in 1955.

Employment rose in many of the non-manufacturing industries surveyed, the most notable exceptions being gold and coal mining and urban and interurban bus transportation; in these, a downward trend had been noted for some years. Relatively, the greatest increases in staffs in 1956 were shown in oil and natural gas production, radio and television broadcasting and in building construction, in all of which employment was more than 20 p.c. above the previous year.

The annual average number of women reported in the surveyed establishments in 1956 was higher by 5.9 p.c. and that of men by 7.1 p.c. For manufacturing only, the increases were 5.3 and 5.8 p.c. respectively. The highest proportion of women in the nine major industries, according to the Oct. 1 survey, was in the finance, insurance and real estate division, in which 493 of each 1,000 employees reported. The service and trade classifications followed with figures of 474 and 366, respectively. The composite figure for Canada was 222. In manufacturing, which employs the largest number of women in the industries surveyed, 228 per 1,000 employees reported were of that sex. Provincially, Ontario continued to have the highest ratio of employed women—almost one-quarter of the total reported in that Province. This is partly accounted for by the fact that there is a great concentration of manufacturing in Ontario. In the metropolitan areas, the proportions of women ranged from a high of 315 in Kitchener, Ont., to a low of 53 per 1,000 in Sydney, N.S.

The expansion of employment during 1956 was widespread, all provinces showing gains of at least 2.7 p.c. over the preceding year. The largest increase was in Alberta, where reported staffs rose 11.1 p.c. as a result of increased activity particularly in construction, iron and steel products and oil, petroleum and coal products. British Columbia followed with a gain of 8.6 p.c. In that Province, construction showed the greatest upswing, but advances in iron and steel products and non-ferrous metal products were quite substantial. In both Alberta and British Columbia, employment in the coal-mining industry continued to decline, and lessened activity in gold mining in British Columbia

dropped the employment index in that group by 16.4 p.c. from 1955. Although industrial employment generally was up 6.8 p.c. in Ontario and Quebec, the manufacturing indexes in those areas did not climb in the same proportions. The gains were 5.9 p.c. in the former and 5.1 p.c. in the latter. Employment in practically all branches of industry in Ontario rose, the exceptions being gold mining and the manufacture of agricultural implements and women's clothing. Metal mining, other than gold, reached an all-time high with the index standing at 203.0, 18.6 p.c. above 1955. Employment in the iron castings and primary iron and steel groups of the iron and steel industry and in construction rose by about 14 p.c. in 1956. In Quebec, the working force reported in forestry operations increased by 18 p.c. from 1955. Staffs in the aircraft industry were up 14.3 p.c. in 1956 following a drop in 1955 caused in part by labour-management disputes. Greatly heightened activity was also recorded in construction and in the electrical apparatus and supplies group of manufacturing. In the Atlantic Provinces, construction operations expanded considerably, and logging in New Brunswick reported an employment gain of more than 25 p.c.

The annual average index of industrial employment rose in most of the 32 metropolitan areas for which monthly data are compiled. The exceptions were Saint John, N.B., where a slight decrease was recorded, and Drummondville, Que., where there was no general change as compared with 1955. The increases in the other centres ranged up to 13.9 p.c. for Sault Ste. Marie, Ont. The larger areas of Montreal and Toronto recorded rises of 6.2 and 5.4 p.c. respectively. Higher levels of employment in construction was a main factor in both cities and, in addition, activity increased substantially in the electrical apparatus field in Montreal. Employment in many centres, including the two just mentioned, reached new all-time high levels in 1956.

The 1956 payroll index stood at 180.5, a new high. The advance over 1955 was 12.7 p.c., the highest rate of annual increase since the 1950-51 period, when it amounted to 18.5 p.c. Expanding employment and upward revisions in wage and salary scales contributed to the rise. All major industrial groups surveyed registered substantial gains, with the construction payroll index advancing 26 p.c. Forestry, service and mining also advanced above the national average. Payrolls in manufacturing generally were 10.8 p.c. over 1955; those in the durable goods component rose to a greater extent than the non-durables, the increases being 13.0 p.c. and 8.3 p.c. respectively.

Provincially, Alberta reported the most marked increase in industrial payrolls—19.5 p.c. above 1955. British Columbia was not too far behind, recording a 15.5-p.c. rise, while wages and salaries in Ontario and Quebec reached levels approximately 12 p.c. above the preceding year. All metropolitan areas for which statistics are published showed increases in this comparison, the gains ranging from 2.2 p.c. in Saint John, N.B., to 28.8 p.c. in Sault Ste. Marie, Ont. Increased employment and higher pay rates in the surveyed industries were the main factors.

The annual average of weekly wages and salaries continued the uninterrupted upward movement in effect since 1939, the earliest year for which data are available, rising by \$3.31 from 1955 to \$64.18, or by 5.4 p.c. This increase exceeded those recorded in the two immediately preceding years by about 2 p.c. As usual, British Columbia reported the highest average, provincially, with weekly earnings of \$69.91. The greatest rate of increase over the preceding year, however, was in Alberta. The trend of weekly wages and salaries was upward in all metropolitan areas except Windsor, Ont., where a decrease of 1.5 p.c. was caused mainly by short time in the automobile industry. Industrially, there were also general increases in average earnings. Mining, which reported the highest wages and salaries in the industries surveyed, showed a figure of \$77.59, which was 21 p.c. above the industrial composite. The greatest rise over 1955 was in construction, where an advance of 10.2 p.c. brought the 1956 average earnings to \$68.26.

Monthly data on man-hours and hourly earnings are collected from employers who keep a record of hours worked by their wage-earners. The industries for which such statistics are available tend to be those in which wage-earners are generally rated by the hour. In manufacturing, the annual average of hourly earnings increased by 4.8 p.c. to

151.5 cents in 1956. This rise was largely attributed to higher wage rates in many establishments and industries, with higher levels of employment in some industries paying above the general average. Labour-management disputes caused smaller losses in working time than in the two previous years and consequently had less effect upon the general average of earnings. The length of the average work week increased negligibly during 1956.

Average weekly wages were up 5.1 p.c. to \$62.27 in the twelve months. The two major components of manufacturing showed similar increases, amounting to 4.8 p.c. in heavy goods manufacturing and 4.7 p.c. in non-durables. The greater advance in manufacturing as a whole reflected relatively larger increases in employment in the former than the latter group. The most significant gains in hourly earnings in the heavy manufacturing industries were reported in primary iron and steel, hardware and tools, and motor vehicle parts and accessories. Almost all individual industries showed higher weekly wages, an exception being motor vehicles, in which wages declined because of a shorter work week. A longer work week and upward revisions of wage rates raised the average in steel mills by 10 p.c. over 1955, the largest increase reported in the durable manufactured goods section.

In the non-durables group, gains of 5 p.c. or more were reported in canned fruit and vegetables, bread and bakery, rubber, paper, chemical and petroleum, and coal products. Substantial losses in employment, hours and earnings were recorded in the textile industry during the summer months, especially in the cotton goods group, partly as a result of strikes. Average weekly wages rose in all light manufacturing industries listed, while the average hours worked were about the same as in 1955. The clothing group as a whole and several of its components, however, showed an average increase of 0.6 hours per week. A similar reduction in the acids, alkalies and salts group resulted chiefly from a shorter standard work week.

In mining, the average hourly earnings rose by 6.4 p.c. to 171.4 cents in 1956, a new high. The largest gains over 1955 were in metal mining and oil and natural gas extraction. In the former, wage-rate increases and a shorter standard work week with the same take-home pay in some mines accounted for part of the increase, although the lay-off of workers from mines paying below the general average was also a factor. Considerable advances in employment in the oil group were reported for higher-paid workers, while pay rates also rose in some cases.

Average hours in mining as a whole dropped by 0.3 per week in 1956 because of a shorter standard work week in metal mining. Other branches reported small gains, the most important of which was coal mining in Alberta. Construction was much more active during the year so that average hourly earnings and weekly wages rose significantly, and the average work week lengthened by 1.2 hours. Moderate increases in average earnings were reported in the electric and motor transportation group, and in those sections of the service industry for which data are available. Average hourly and weekly earnings in manufacturing increased in all provinces and in most of the metropolitan areas in 1956 and established new records.

4.—Annual Average Index Numbers of Employment by Industrial Division and Group 1939 and 1952-56

NOTE.—These monthly indexes are calculated as at the first day of the month, on the base 1949=100.

Industry	1939	1952	1953	1954	1955	1956
Forestry (chiefly logging).....	59.3	123.9	100.0	95.1	101.8	113.3
Mining.....	93.7	116.8	111.7	109.8	113.4	122.0
Metal mining.....	100.8	118.3	112.0	111.3	116.8	126.0
Gold.....	132.5	94.7	83.6	80.6	81.2	76.5
Other metal.....	66.9	140.7	137.6	139.9	150.1	171.9
Fuels.....	90.8	109.5	105.8	101.4	102.7	109.8
Coal.....	103.3	91.2	83.8	76.8	70.3	67.6
Oil and natural gas.....	42.5	171.8	177.1	183.0	209.4	253.8
Non-metal.....	72.6	132.9	130.7	129.0	131.3	141.3

4.—Annual Average Index Numbers of Employment by Industrial Division and Group 1939 and 1952-56—continued

Industry	1939	1952	1953	1954	1955	1956
Manufacturing	56.3	109.3	113.3	107.7	109.3	115.4
Foods and beverages	63.3	105.1	104.6	105.6	106.8	109.4
Meat products	60.8	111.7	113.8	113.8	117.8	123.6
Dairy products	61.3	102.4	103.6	107.4	106.9	109.0
Canned and cured fish	72.3	110.1	94.1	107.2	114.6	114.2
Canned and preserved fruits and vegetables	65.6	107.3	103.9	104.9	106.6	109.8
Grain mill products	62.0	109.0	102.7	104.7	105.1	103.1
Bread and other bakery products	68.8	104.7	106.0	103.6	107.0	108.8
Biscuits and crackers		89.0	97.9	95.8	93.9	93.9
Distilled and malt liquors	48.7	100.7	104.2	106.4	105.4	108.7
Other beverages	56.0	107.7	109.4	110.3	112.7	120.4
Confectionery		89.0	90.1	87.6	83.1	87.1
Tobacco and tobacco products	87.4	85.8	86.6	87.0	89.7	88.3
Rubber products	69.3	102.1	109.2	102.2	108.8	114.1
Leather products	81.0	92.8	96.6	88.4	86.4	89.6
Boots and shoes (except rubber)	81.4	94.6	97.5	91.2	89.2	92.6
Other leather products	80.5	89.8	95.2	83.1	81.3	84.2
Textile products (except clothing)	67.9	93.1	94.5	80.6	84.8	86.8
Cotton yarn and broad woven goods	86.4	94.8	95.3	79.7	85.8	88.2
Woolen goods	66.8	84.2	85.6	67.6	71.4	74.3
Synthetic textiles and silk	49.0	93.1	95.6	82.3	87.1	85.8
Clothing (textile and fur)	71.3	100.0	101.7	91.9	91.5	94.2
Men's clothing	69.3	104.1	106.8	95.8	95.7	100.8
Women's clothing	65.0	105.4	100.5	94.8	92.4	92.9
Knit goods	82.5	87.1	91.4	80.4	79.9	81.8
Fur goods	63.2	88.0	91.5	76.6	75.2	69.5
Hats and caps	98.1	96.3	96.5	89.6	87.6	83.7
Wood products	60.7	101.5	105.5	100.8	106.7	110.4
Saw and planing mills	59.5	103.6	106.7	102.3	110.4	112.6
Furniture	61.3	101.3	106.9	102.8	105.4	111.5
Other wood products	64.6	93.7	98.2	90.5	92.3	98.4
Paper products	58.8	108.6	109.8	114.5	117.8	123.5
Pulp and paper mills	62.5	111.5	111.3	117.5	121.1	126.1
Other paper products	50.2	102.0	106.2	107.2	109.5	117.0
Printing, publishing and allied trades	66.1	104.3	106.8	109.7	111.7	114.9
Iron and steel products	45.6	113.0	111.8	100.5	102.0	111.8
Agricultural implements	28.7	105.5	83.8	65.1	66.6	59.8
Boilers and plate work	48.1	122.3	121.5	111.9	109.7	115.5
Fabricated and structural steel	39.1	131.5	137.1	127.5	127.5	151.4
Hardware and tools	50.5	105.1	108.7	100.9	101.8	107.7
Heating and cooking appliances	54.0	84.0	96.9	94.8	97.6	106.0
Iron castings	42.6	102.5	100.7	88.9	94.3	107.1
Machinery manufacturing	41.6	115.9	115.8	109.4	108.2	121.0
Primary iron and steel	54.1	123.9	119.3	98.9	107.2	122.4
Sheet metal products	49.6	105.3	110.3	106.1	106.3	113.1
Wire and wire products	68.8	103.4	100.2	96.8	101.2	115.6
Transportation equipment	45.9	136.7	153.0	136.3	130.4	140.0
Aircraft and parts	31.6	282.2	386.2	357.3	328.5	350.1
Motor vehicles	45.6	113.3	119.7	105.8	119.2	131.8
Motor vehicle parts and accessories	45.6	124.0	131.9	106.9	113.0	117.6
Railroad and rolling-stock equipment	56.9	111.0	110.3	95.2	83.3	92.8
Shipbuilding and repairing	28.9	150.8	173.5	161.2	138.6	147.8
Non-ferrous metal products	48.6	110.0	118.1	117.1	124.6	132.0
Aluminum products	23.3	117.0	126.9	119.6	126.6	137.7
Brass and copper products	48.9	101.2	108.7	103.9	105.7	112.4
Smelting and refining	59.8	126.3	129.6	133.2	147.5	155.7
Electrical apparatus and supplies	37.4	120.8	135.4	133.7	136.4	151.4
Non-metallic mineral products	46.2	110.5	113.5	114.8	122.4	133.7
Clay products	48.2	101.4	102.5	101.9	106.5	113.0
Glass and glass products	46.3	101.6	117.0	118.1	126.0	134.3
Products of petroleum and coal	65.6	119.1	119.4	120.8	125.0	132.9
Chemical products	47.6	113.9	116.9	120.9	121.9	127.3
Medicinal and pharmaceutical preparations	47.0	103.2	104.7	107.3	110.1	115.5
Acids, alkalies and salts	50.7	126.0	120.8	120.5	125.6	132.3
Other chemical products		112.8	118.7	124.3	124.0	129.2
Miscellaneous manufacturing industries	50.2	97.9	107.1	105.3	102.5	108.3
Construction	62.0	122.5	118.6	110.7	114.9	130.8
Building and structures	29.3	127.1	128.2	115.8	117.4	138.7
Highways, bridges and streets	110.5	105.6	98.3	102.4	111.1	118.3
Transportation, Storage and Communication	59.8	110.9	111.3	109.0	110.5	117.7
Transportation	62.4	109.2	109.3	105.2	105.7	111.4
Air transporting and airports	18.5	126.1	138.9	153.9	169.4	183.7

4.—Annual Average Index Numbers of Employment by Industrial Division and Group 1939 and 1952-56—concluded

Industry	1939	1952	1953	1954	1955	1956
Transportation, Storage and Communication —concluded						
Transportation—concluded						
Railways.....	65.9	110.6	110.3	103.9	103.3	108.6
Maintenance of equipment.....	55.1	120.6	120.7	111.4	107.3	111.0
Maintenance of ways and structures.....	69.9	106.2	102.2	91.8	91.6	100.7
Transportation—railways.....	66.5	108.9	110.1	105.9	105.9	110.3
Telegraphs.....	65.4	118.3	124.4	119.6	117.9	119.5
Water transportation.....	63.2	103.5	99.3	95.4	95.8	101.4
Electric and motor transportation.....		103.6	107.1	109.9	112.4	118.4
Urban and interurban transportation.....	56.3	94.5	93.4	92.1	89.2	87.5
Truck transportation.....	54.1	133.5	136.8	142.5	155.5	173.6
Storage.....	73.9	111.4	112.2	108.6	107.6	115.6
Grain elevators.....	79.2	111.5	111.9	106.6	104.7	107.6
Storage and warehouses.....	55.2	107.0	112.4	114.9	116.8	139.6
Communication.....	41.2	118.9	121.4	129.0	136.9	151.4
Radio broadcasting.....		129.6	138.0	171.7	212.5	261.5
Telephone.....	41.3	117.1	119.7	125.6	130.6	142.0
Public Utility Operation	54.9	107.5	112.1	115.7	118.9	125.7
Electric light and power.....	53.1	111.3	115.4	118.6	121.5	127.3
Other public utilities.....	70.0	80.6	87.0	98.4	104.9	117.2
Trade	61.5	109.9	113.2	114.6	118.1	125.5
Wholesale.....	60.2	113.2	116.1	116.9	120.2	127.4
Retail.....	62.3	107.9	111.8	113.4	117.1	124.6
Finance, Insurance and Real Estate	67.8	121.9	122.4	127.4	132.0	136.4
Banking, investment and loan.....	62.9	125.4	125.8	131.9	136.7	139.7
Insurance.....	75.7	115.7	116.2	119.7	123.6	128.7
Service	56.8	106.6	108.7	111.4	114.5	124.4
Hotels and restaurants.....	55.4	103.6	104.4	107.6	109.9	119.4
Laundries and dry-cleaning plants.....	63.1	101.0	101.4	102.6	104.7	109.6
Other service.....		118.0	133.3	139.0	145.3	160.8
Industrial Composite	60.1	111.6	113.4	109.9	112.5	120.1

5.—Annual Average Index Numbers of Employment by Province 1947-56, and Monthly Indexes 1955 and 1956

NOTE.—These indexes are calculated as at the first day of the month, on the base 1949=100.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada ¹
Averages—											
1947.....	..	93.3	92.1	104.3	97.8	94.7	93.6	97.2	88.1	97.1	95.7
1948.....	..	102.6	99.6	105.2	101.2	98.9	97.2	99.5	93.7	101.3	99.7
1949.....	..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1950.....	..	110.3	95.6	102.6	100.5	102.7	100.8	100.8	104.5	100.8	101.5
1951.....	111.7	112.6	100.3	109.0	109.2	110.4	103.9	106.0	112.4	106.1	108.8
1952.....	130.2	123.2	104.0	109.5	113.4	112.0	106.0	111.4	120.8	106.7	111.6
1953.....	140.9	116.4	101.2	101.4	112.8	114.7	107.2	116.0	128.5	108.4	113.4
1954.....	128.2	110.1	97.7	97.8	109.2	110.9	104.8	118.0	127.6	106.2	109.9
1955.....	131.0	113.3	96.8	103.1	112.0	113.0	105.0	117.2	132.6	111.3	112.5
1956.....	136.9	117.7	101.7	109.9	119.6	120.7	109.3	120.4	147.3	120.9	120.1
1955—											
Jan. 1.....	123.5	103.2	96.8	102.9	109.7	109.2	103.5	115.8	128.5	103.9	109.1
Feb. 1.....	113.9	96.7	91.7	96.3	105.7	107.4	100.7	107.8	123.7	99.8	105.8
Mar. 1.....	110.3	101.4	91.4	96.2	104.6	108.2	98.8	106.7	121.4	101.0	105.6
Apr. 1.....	113.4	97.6	92.3	95.0	103.4	108.8	98.5	106.1	121.2	103.1	105.7
May 1.....	118.8	107.6	91.6	93.9	105.3	110.3	101.2	108.7	121.0	106.2	107.4
June 1.....	129.7	117.4	96.5	100.4	110.6	113.0	104.8	117.4	129.8	110.4	111.7
July 1.....	138.4	118.2	98.6	104.7	114.2	115.7	107.4	122.7	138.1	115.1	115.3
Aug. 1.....	143.6	119.3	98.7	106.5	115.0	115.3	108.6	125.7	143.0	118.0	116.1
Sept. 1.....	144.1	123.6	101.6	111.4	117.6	117.0	109.6	126.3	143.8	121.8	118.3
Oct. 1.....	147.5	124.2	103.2	110.7	118.8	117.1	109.7	123.9	142.7	120.4	118.5
Nov. 1.....	147.9	129.9	99.1	109.6	119.4	117.1	109.1	124.2	140.0	119.2	118.2
Dec. 1.....	140.9	120.9	100.5	110.2	119.7	117.1	108.5	121.6	137.5	116.6	117.9

¹ Exclusive of Newfoundland prior to 1951.

5.—Annual Average Index Numbers of Employment by Province 1947-56, and Monthly Indexes 1955 and 1956—concluded

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada ¹
1956—											
Jan. 1.....	125.1	113.4	99.5	107.4	115.6	115.3	105.2	113.3	133.6	111.4	114.6
Feb. 1.....	122.7	108.4	96.9	108.2	112.5	113.5	103.2	107.9	132.2	109.1	112.3
Mar. 1.....	119.5	125.7	100.4	105.4	112.1	115.5	102.8	107.1	132.0	110.9	113.2
Apr. 1.....	117.7	105.7	95.2	102.0	111.4	116.7	102.9	108.3	134.4	113.2	113.5
May 1.....	119.4	102.3	93.7	99.0	113.3	118.3	103.8	111.9	136.7	117.5	115.2
June 1.....	133.5	111.9	101.7	107.5	117.4	121.2	107.1	122.4	148.5	122.1	119.7
July 1.....	147.2	118.9	105.1	115.8	124.3	123.7	110.7	127.6	155.9	125.1	124.2
Aug. 1.....	153.8	122.6	105.9	116.5	124.2	124.1	113.0	130.7	162.7	129.0	125.4
Sept. 1.....	156.1	127.3	106.9	116.7	125.2	123.4	113.8	131.0	162.5	131.1	125.7
Oct. 1.....	154.6	127.3	104.6	113.9	126.1	124.7	113.0	129.7	158.3	130.0	125.9
Nov. 1.....	151.2	126.6	105.7	112.8	126.5	126.0	112.2	128.7	155.6	127.6	126.2
Dec. 1.....	142.5	122.2	104.7	114.1	127.0	126.0	111.5	126.6	154.7	124.0	125.7
Percentage distribution in 1956 ²	1.5	0.2	3.2	2.4	28.6	42.2	4.8	2.3	5.5	9.3	100.0

¹ Exclusive of Newfoundland prior to 1951.

² The proportion of employees reported in the provinces to the total reported by all employers making returns in Canada (12-month average).

6.—Annual Average Index Numbers of Employment by Metropolitan Area 1947-56, and Monthly Indexes 1955 and 1956

NOTE.—These indexes are calculated as at the first day of the month, on the base 1949=100.

Year	Montreal	Quebec	Toronto	Ottawa-Hull	Hamilton	Windsor	Winnipeg	Vancouver
Averages—								
1947.....	94.3	92.2	93.2	91.4	91.6	92.2	93.9	96.9
1948.....	97.1	100.5	97.3	96.5	96.9	94.5	97.1	102.1
1949.....	100.0	100.0	100.0	100.0	100.0	100.0	106.0	100.0
1950.....	101.3	98.7	104.1	103.1	100.8	102.2	100.1	99.0
1951.....	106.6	101.6	110.7	108.4	109.5	107.7	102.7	101.4
1952.....	110.9	105.2	113.3	108.9	109.2	107.0	104.0	100.1
1953.....	113.8	110.9	119.6	109.4	111.4	111.1	104.1	102.2
1954.....	110.8	110.7	120.1	109.7	104.3	93.9	103.3	102.5
1955.....	112.8	107.9	121.2	113.6	105.6	101.1	104.4	107.2
1956.....	119.8	110.8	127.7	119.2	113.3	105.0	106.6	116.9
1955—								
Jan. 1.....	109.9	104.9	120.7	111.1	100.2	79.6	103.4	103.4
Feb. 1.....	107.1	102.0	118.2	109.4	99.3	81.2	100.8	100.0
Mar. 1.....	107.7	101.3	118.0	107.4	99.6	100.4	99.2	100.5
Apr. 1.....	108.4	102.8	118.4	108.5	101.0	103.7	99.2	102.1
May 1.....	110.7	106.1	119.5	110.3	102.3	105.5	102.5	104.2
June 1.....	113.0	107.5	120.7	113.9	104.9	107.4	104.3	106.4
July 1.....	114.2	108.9	121.6	115.7	107.4	110.5	105.7	109.5
Aug. 1.....	113.6	111.4	120.2	116.5	107.5	106.4	106.4	111.0
Sept. 1.....	115.8	112.5	122.3	117.1	110.3	92.5	107.2	113.6
Oct. 1.....	117.3	112.9	124.2	117.8	111.7	105.6	107.6	111.9
Nov. 1.....	117.7	112.3	124.6	117.5	111.0	109.7	108.4	112.1
Dec. 1.....	118.7	111.9	126.2	117.6	111.6	110.2	108.7	112.3
1956—								
Jan. 1.....	116.0	106.2	125.5	115.7	110.1	108.1	105.5	110.7
Feb. 1.....	114.2	103.7	123.2	112.7	109.1	105.6	103.0	108.4
Mar. 1.....	114.0	103.7	124.0	113.4	108.8	107.9	102.1	109.3
Apr. 1.....	115.3	104.0	125.1	114.5	110.0	109.2	102.3	111.8
May 1.....	117.7	107.9	125.9	116.0	112.6	109.9	103.6	114.6
June 1.....	119.5	108.6	127.3	119.5	114.7	106.7	105.4	117.5
July 1.....	121.2	114.8	129.2	122.1	116.3	107.9	108.3	119.2
Aug. 1.....	120.7	116.4	128.0	123.4	115.2	107.7	109.2	121.3
Sept. 1.....	122.7	116.1	129.3	123.3	114.7	87.1	109.5	123.5
Oct. 1.....	124.9	117.1	130.2	122.9	115.2	96.2	110.2	122.6
Nov. 1.....	125.1	115.9	132.0	123.5	116.6	105.9	110.1	122.4
Dec. 1.....	126.0	115.0	132.9	123.6	116.6	107.4	109.7	121.9
Percentage distribution ¹								
1956.....	14.9	1.5	14.9	1.8	3.0	1.7	3.2	4.2

¹ Proportion of employees reported in metropolitan areas to the total reported by all employers making returns in Canada (12-month average).

7.—Annual Index Numbers of Employment, Payrolls and Earnings together with Average Weekly Earnings, by Industry, Province and Metropolitan Area 1955 and 1956

Industry, Province and Metropolitan Area	Index Numbers (1949=100)						Average Weekly Earnings Reported	
	Employment		Aggregate Weekly Payrolls		Average Weekly Earnings			
	1955	1956	1955	1956	1955	1956	1955	1956
Industry							\$	\$
Forestry (chiefly logging).....	101.8	113.3	153.9	185.3	148.5	160.1	60.31	65.04
Mining.....	113.4	122.0	161.8	184.3	142.3	150.7	73.25	77.59
Manufacturing.....	109.3	115.4	158.4	175.5	144.1	151.2	63.34	66.47
Durable goods ¹	116.6	125.7	168.8	190.8	144.0	151.0	67.90	71.16
Non-durable goods ¹	102.9	106.4	148.1	160.4	143.0	149.8	58.89	61.69
Construction.....	114.9	130.8	172.1	216.8	150.0	165.4	61.94	68.26
Transportation, storage and communication.....	110.5	117.7	148.3	164.4	133.1	138.4	64.39	66.99
Public utility operation.....	118.9	125.7	176.2	195.3	146.6	153.6	70.56	73.93
Trade.....	118.1	125.5	166.2	184.0	141.3	147.4	52.25	54.49
Finance, insurance and real estate.....	132.0	136.4	176.6	193.7	133.8	142.3	56.48	60.07
Service ²	114.5	124.4	159.6	182.3	144.5	152.4	40.54	42.74
Totals	112.5	120.1	160.2	180.5	141.7	149.4	60.87	64.18
Province								
Newfoundland.....	131.0	136.9	189.1	209.4	144.2	152.3	54.08	57.14
Prince Edward Island.....	113.3	117.7	153.3	165.0	136.0	140.9	45.64	47.27
Nova Scotia.....	96.8	101.7	131.2	143.2	134.7	139.9	50.70	52.67
New Brunswick.....	103.1	109.9	141.5	159.5	136.3	143.9	51.91	54.81
Quebec.....	112.0	119.6	159.5	179.9	141.9	149.6	58.43	61.63
Ontario.....	113.0	120.7	162.1	181.9	143.0	150.2	63.43	66.61
Manitoba.....	105.0	108.3	143.6	154.7	136.2	142.2	58.14	60.69
Saskatchewan.....	117.2	120.4	164.2	178.8	139.5	147.6	57.88	61.26
Alberta.....	132.6	147.3	185.3	221.4	139.7	150.1	62.01	66.63
British Columbia.....	111.3	120.9	160.7	185.6	144.1	153.1	65.79	69.91
Metropolitan Area								
St. John's.....	118.2	123.0	165.1	180.0	139.5	146.1	44.97	47.09
Sydney.....	90.2	90.8	117.8	122.9	130.7	135.7	61.36	63.72
Halifax.....	112.9	118.1	157.4	171.0	140.0	145.3	49.60	51.51
Saint John.....	101.4	101.2	139.2	142.2	137.7	140.7	49.35	50.43
Quebec.....	107.9	110.8	154.4	167.0	142.3	149.8	50.76	53.42
Sherbrooke.....	102.4	107.5	143.4	159.9	140.5	149.2	50.47	53.60
Three Rivers.....	104.3	117.9	146.9	172.4	138.5	143.7	57.76	59.92
Drummondville.....	75.4	75.4	103.3	106.7	136.8	141.4	53.16	54.95
Montreal.....	112.8	119.8	160.9	180.0	142.3	149.8	59.49	62.63
Ottawa-Hull.....	113.6	119.2	162.4	177.6	143.4	149.3	56.24	58.56
Peterborough.....	94.9	103.6	135.1	159.2	142.3	149.6	63.74	67.00
Oshawa.....	137.8	156.4	186.4	234.5	131.6	147.2	68.52	74.96
Niagara Falls.....	123.6	126.8	182.9	197.9	144.5	151.8	67.57	70.99
St. Catharines.....	112.5	122.9	162.0	186.8	143.1	150.8	70.71	74.51
Toronto.....	121.2	127.7	176.6	194.5	146.3	153.0	64.41	67.40
Hamilton.....	105.6	113.3	149.4	170.2	140.5	149.3	65.54	69.67
Brantford.....	84.3	88.6	115.4	125.1	137.1	141.4	59.91	61.78
Galt.....	98.2	108.7	138.7	161.8	141.1	148.6	55.48	58.40
Kitchener.....	105.1	112.3	153.0	169.1	145.8	150.7	59.24	61.25
Sudbury.....	130.9	137.2	183.9	201.7	140.4	146.6	75.11	78.46
London.....	111.4	116.9	160.3	176.6	143.0	149.9	58.28	61.11
Sarnia.....	120.3	131.4	185.3	221.1	153.7	163.8	74.71	79.61
Windsor.....	101.1	105.0	141.2	147.5	141.6	139.5	71.86	70.79
Sault Ste. Marie.....	112.8	128.5	156.9	202.1	138.5	156.6	70.60	79.83
Fort William-Port Arthur.....	107.5	112.3	149.7	165.5	137.2	151.0	62.32	65.95
Winnipeg.....	104.4	106.6	146.5	155.0	141.5	146.6	55.63	57.64
Regina.....	115.6	118.0	168.2	180.7	145.1	152.5	55.50	58.34
Saskatoon.....	118.4	119.8	172.8	181.4	145.5	151.2	54.46	56.59
Edmonton.....	154.3	173.6	224.6	268.5	145.9	154.8	59.23	62.83
Calgary.....	140.6	152.9	198.9	226.3	141.6	148.2	59.43	62.18
Vancouver.....	107.2	116.9	155.3	179.8	145.1	153.7	63.50	67.26
Victoria.....	115.6	119.9	165.3	177.1	142.3	147.0	59.51	61.47

¹ The durable goods group includes wood products, iron and steel products, transportation equipment, non-ferrous metal products, electrical apparatus and supplies, and non-metallic mineral products; the non-durable goods group includes all other manufacturing industries. ² Mainly hotels, restaurants, laundries, dry-cleaning establishments and business and recreation service.

8.—Annual Average Weekly Earnings by Industrial Group 1947-56, and Monthly Averages 1955 and 1956

Year and Month	Forestry (chiefly logging)	Mining	Manu- factur- ing	Con- struc- tion	Trans- porta- tion, Storage and Communi- cation	Public Utility Oper- ation	Trade	Finance, Insur- ance, Real Estate	Serv- ice ¹	Indus- trial Com- posite
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Averages—										
1947.....	35.42	43.03	36.34	34.85	41.23	41.05	31.29	38.34	23.48	36.19
1948.....	39.11	48.77	40.67	37.99	45.51	45.16	34.38	40.08	25.87	40.06
1949.....	40.62	51.49	43.97	41.28	48.39	48.14	36.97	42.22	28.05	42.96
1950.....	42.01	53.95	46.21	43.27	49.15	51.14	38.81	43.90	29.50	44.84
1951.....	48.40	59.82	51.25	48.36	53.76	55.93	42.71	46.26	31.61	49.61
1952.....	55.31	65.35	56.11	55.37	56.48	61.66	45.89	49.13	34.05	54.13
1953.....	58.11	68.70	59.01	60.57	61.09	65.16	48.26	51.64	36.87	57.30
1954.....	59.85	70.48	60.94	61.04	62.62	67.76	50.60	53.78	38.77	58.88
1955.....	60.31	73.25	63.34	61.94	64.39	70.56	52.25	56.48	40.54	60.87
1956.....	65.04	77.59	66.47	68.26	66.99	73.93	54.49	60.07	42.74	64.18
1955—										
Jan. 1.....	59.84	70.33	60.80	56.70	63.15	68.33	50.72	54.45	39.57	58.49
Feb. 1.....	58.42	73.40	62.53	62.36	63.18	70.71	51.83	55.10	39.90	60.15
Mar. 1.....	64.68	73.57	63.11	63.16	64.13	70.83	51.96	55.47	40.11	60.86
Apr. 1.....	59.54	72.01	63.28	62.07	63.81	71.03	52.04	56.29	40.34	60.68
May 1.....	60.52	71.92	63.81	60.88	64.32	70.86	52.21	56.61	40.78	60.96
June 1.....	58.61	72.06	63.54	60.47	64.18	70.99	52.30	56.51	40.68	60.76
July 1.....	59.69	72.83	63.28	61.36	64.40	69.90	52.82	56.80	40.28	60.87
Aug. 1.....	61.94	73.37	63.18	62.49	65.14	69.81	53.01	56.61	40.20	61.13
Sept. 1.....	59.48	73.34	63.24	63.44	64.48	69.81	52.98	56.39	40.21	61.11
Oct. 1.....	57.93	73.99	64.04	63.19	65.02	70.61	52.56	57.83	40.91	61.49
Nov. 1.....	60.92	75.92	64.54	63.89	65.10	71.69	52.59	57.83	41.48	61.97
Dec. 1.....	62.14	76.32	64.71	63.33	65.74	72.18	51.99	57.92	42.04	62.02
1956—										
Jan. 1.....	63.57	73.66	62.47	58.71	65.17	71.24	52.72	58.08	41.64	60.54
Feb. 1.....	56.96	76.82	65.05	66.29	64.57	72.61	53.61	58.51	42.02	62.43
Mar. 1.....	63.00	77.43	65.57	67.32	65.20	73.59	54.06	58.96	42.48	63.20
Apr. 1.....	63.35	76.16	66.02	66.78	65.41	73.63	54.15	60.65	42.60	63.43
May 1.....	63.88	76.54	66.70	67.58	65.34	72.91	54.53	60.96	42.91	63.93
June 1.....	62.37	77.07	66.46	67.76	65.74	72.84	54.79	60.56	42.73	63.93
July 1.....	67.05	77.24	66.89	67.44	67.82	72.98	55.22	60.39	42.28	64.56
Aug. 1.....	67.44	77.49	66.44	70.25	67.99	73.24	55.36	60.53	42.32	64.77
Sept. 1.....	66.06	78.01	66.71	71.25	68.06	74.76	55.24	60.58	42.37	65.01
Oct. 1.....	67.79	80.30	67.97	72.87	69.50	76.37	55.07	60.42	43.33	66.07
Nov. 1.....	69.80	79.53	68.53	72.12	69.72	76.36	54.83	60.42	43.82	66.24
Dec. 1.....	69.22	80.87	68.78	70.78	69.38	76.65	54.29	60.79	44.39	66.11

¹ Mainly hotels, restaurants, laundries, dry-cleaning establishments and business and recreation service.

Subsection 3.—Earnings and Hours of Work of Male and Female Employees in Manufacturing Establishments

An annual inquiry is made in the last week of October each year into the earnings and hours of work of employees in manufacturing, providing more detailed data than are obtained from the monthly series of employment, payrolls and man-hours. Each year statistics of earnings and hours are requested for men and women wage-earners and salaried staffs. Rotating in a three-year cycle since 1949, additional data were collected as follows: (1) a distribution of wage-earners by a given range of hours; (2) office and clerical workers segregated from the general salaried data; and (3) a distribution of wage-earners and salaried staff employees by a given range of weekly earnings.

As in the monthly survey, the inquiry is limited to establishments employing 15 persons or over, accounting for about 90 p.c. of all employees reported to the Annual Census of Manufacturing. Establishments are asked to supply statistics for all regular employees, full- and part-time, as well as for casual workers who received pay in the week ended Oct. 31. Categories such as homeworkers, proprietors, firm members or directors, pensioners and staffs of separately organized sales branches are purposely excluded from

the reports. Gross payrolls are reported for the various categories before deductions for income tax and social security contributions. Such payments as regular bonuses and for absences in the week surveyed as well as overtime earnings are included. Part-time, full-time and overtime hours worked and hours of paid absence are given.

From 1946, when the first inquiry in the present series was made, to 1956, average earnings have shown a steady rise, weekly wages increasing by 97.6 p.c. and salaries by 94.4 p.c. In both cases, the annual averages of earnings of women have usually risen at a somewhat higher percentage rate though by smaller amounts, than those of men. The shortening of the work week in the postwar period has resulted in a considerably greater advance in average hourly wages than in average weekly wages.

Table 9 shows average earnings and average hours worked in certain industries. Table 10 shows the average hourly earnings of wage-earners and the increases recorded from year to year for the two sexes. Tables 11 and 12 summarize the available averages of hours worked, hourly earnings and weekly earnings for male and female wage-earners and salaried staffs for the last week in October 1955 and 1956. Table 13 shows the proportion of women employees and also the proportion of their average earnings to men's earnings for 1954, 1955 and 1956.

9.—Average Hours and Earnings in Specified Industries and Areas 1955 and 1956

Industry, Province and Metropolitan Area	Average Hours Worked		Average Hourly Earnings		Average Weekly Wages	
	1955	1956	1955	1956	1955	1956
	No.	No.	cts.	cts.	\$	\$
Industry						
Mining	43.2	42.9	161.1	171.4	69.60	73.53
Metal mining.....	44.1	43.2	165.4	178.0	72.94	76.90
Coal mining.....	39.5	40.7	148.1	149.2	58.50	60.72
Manufacturing	41.0	41.1	144.5	151.5	59.25	62.27
Durable goods ¹	41.2	41.2	155.7	163.2	64.15	67.24
Non-durable goods ¹	40.8	40.9	132.7	138.6	54.14	56.69
Construction	39.9	41.1	150.9	163.9	60.21	67.36
Buildings and structures.....	39.5	41.0	162.5	176.5	64.19	72.37
Highways, bridges and streets.....	40.9	41.4	126.1	133.9	51.57	55.43
Service	40.4	40.3	85.6	89.0	34.58	35.87
Hotels and restaurants.....	40.8	40.4	85.2	88.8	34.76	35.88
Laundries and dry-cleaning plants.....	40.5	40.8	81.8	85.0	33.13	34.68
Province						
Newfoundland.....	41.5	41.6	136.8	141.5	56.77	58.86
Nova Scotia.....	40.9	40.9	126.4	133.2	51.70	54.48
New Brunswick.....	41.9	41.9	128.3	135.2	53.76	56.65
Quebec.....	42.2	42.3	130.0	136.2	54.86	57.61
Ontario.....	40.8	40.7	152.1	159.6	62.06	64.96
Manitoba.....	40.2	40.5	137.4	143.1	55.23	57.96
Saskatchewan.....	40.4	40.0	150.4	156.4	60.76	62.56
Alberta.....	40.1	40.1	150.8	156.1	60.47	62.60
British Columbia.....	38.3	38.2	173.1	180.6	66.30	68.99
Metropolitan Area						
Montreal.....	41.1	41.4	135.6	142.0	55.73	58.79
Toronto.....	40.4	40.6	151.9	157.6	61.37	63.99
Hamilton.....	40.3	40.6	163.1	174.2	65.73	70.73
Windsor.....	40.4	38.1	175.6	180.0	70.94	68.58
Winnipeg.....	39.9	40.3	135.2	140.3	53.94	56.54
Vancouver.....	38.0	38.2	169.9	176.9	64.56	67.58

¹ The durable goods group includes wood products, iron and steel products, transportation equipment, non-ferrous metal products, electrical apparatus and supplies, and non-metallic mineral products; the non-durable goods group includes all other manufacturing industries.

10.—Average Earnings of Male and Female Workers and Increases over the Preceding Year, Weeks Ended Oct. 31, 1951-56

(As reported by manufacturers usually employing 15 or more persons.)

Year	Men			Women			Both Sexes		
	Average Earnings	Increase over Preceding Year		Average Earnings	Increase over Preceding Year		Average Earnings	Increase over Preceding Year	
AVERAGE HOURLY EARNINGS OF WAGE EARNERS									
	\$	\$	p.c.	\$	\$	p.c.	\$	\$	p.c.
1951.....	1.31	0.17	14.9	0.82	0.10	13.9	1.22	0.16	15.1
1952.....	1.40	0.09	6.9	0.86	0.04	4.9	1.30	0.08	6.6
1953.....	1.47	0.07	5.0	0.91	0.05	5.8	1.36	0.06	4.6
1954.....	1.51	0.04	2.7	0.93	0.02	2.2	1.40	0.04	2.9
1955.....	1.57	0.06	4.0	0.95	0.02	2.2	1.44	0.04	2.9
1956.....	1.66	0.09	5.7	1.00	0.05	5.3	1.53	0.09	6.2
AVERAGE WEEKLY WAGES									
	\$	\$	p.c.	\$	\$	p.c.	\$	\$	p.c.
1951.....	56.46	5.53	10.9	31.27	2.27	7.8	51.32	5.38	11.7
1952.....	60.85	4.39	7.8	34.17	2.90	9.3	55.17	3.85	7.5
1953.....	62.71	1.86	3.1	35.07	0.90	2.6	56.75	1.58	2.9
1954.....	63.98	1.27	2.0	35.90	0.83	2.4	57.99	1.24	2.2
1955.....	66.86	2.88	4.5	37.52	1.62	4.5	60.53	2.54	4.4
1956.....	70.67	3.81	5.7	39.29	1.77	4.7	63.97	3.44	5.7
AVERAGE WEEKLY SALARIES									
	\$	\$	p.c.	\$	\$	p.c.	\$	\$	p.c.
1951.....	77.55	8.20	11.8	38.42	4.04	11.8	65.98	7.24	12.3
1952.....	82.60	5.05	6.5	41.26	2.84	7.4	70.75	4.77	7.2
1953.....	86.43	3.83	4.6	43.13	1.87	4.5	73.87	3.12	4.4
1954.....	90.99	4.56	5.3	45.00	1.87	4.3	77.81	3.94	5.3
1955.....	93.50	2.51	2.8	47.02	2.02	4.5	80.57	2.76	3.5
1956.....	99.05	5.55	5.9	49.31	2.29	4.9	85.23	4.66	5.8

11.—Average Hours and Earnings of Male and Female Wage Earners for the Last Week of October 1955 and 1956

(As reported by manufacturers usually employing 15 or more persons.)

Province	Average Hours Worked			Average Hourly Earnings			Average Weekly Earnings		
	Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
1955									
Province	No.	No.	No.	\$	\$	\$	\$	\$	\$
Newfoundland.....	41.9	38.0	41.5	1.46	0.55	1.37	61.17	20.72	56.93
Nova Scotia.....	41.6	39.9	41.4	1.34	0.62	1.25	55.62	24.70	51.53
New Brunswick.....	43.9	39.0	43.2	1.34	0.73	1.26	58.82	28.33	54.37
Quebec.....	44.7	39.8	43.3	1.43	0.89	1.29	63.69	35.53	55.84
Ontario.....	42.1	39.3	41.6	1.64	1.02	1.52	69.25	40.06	63.25
Manitoba.....	42.3	39.1	41.6	1.50	0.87	1.37	63.38	34.19	57.10
Saskatchewan.....	42.1	36.5	41.4	1.51	0.99	1.45	63.70	36.00	60.13

11.—Average Hours and Earnings of Male and Female Wage Earners for the Last Week of October 1955 and 1956—continued

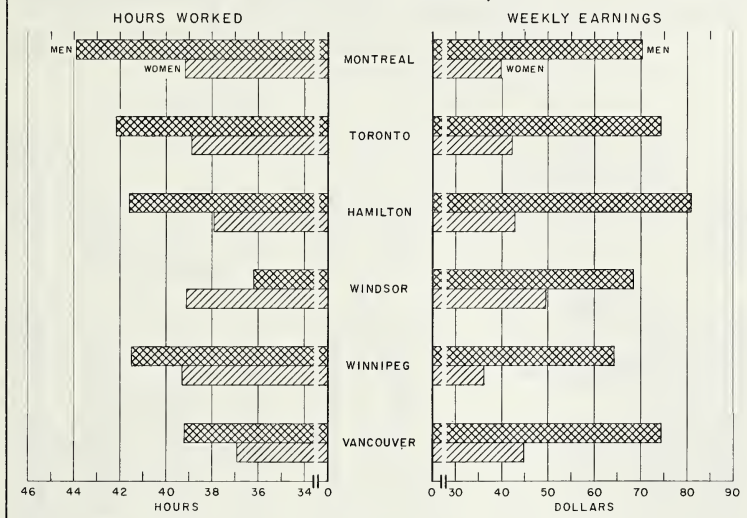
Province, Metropolitan Area and Industry	Average Hours Worked			Average Hourly Earnings			Average Weekly Earnings		
	Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
1955—concluded									
Province—concluded									
Alberta.....	41.8	37.9	41.3	1.56	1.04	1.50	65.16	39.31	61.80
British Columbia.....	39.9	36.4	39.6	1.81	1.12	1.74	72.14	40.96	68.88
Totals.....	42.7	39.4	42.0	1.44	0.95	1.44	66.86	37.52	60.53
Metropolitan Area									
Montreal.....	44.1	38.9	42.5	1.50	0.96	1.35	66.33	37.23	57.17
Toronto.....	42.3	39.1	41.4	1.67	1.03	1.51	70.78	40.38	62.48
Hamilton.....	42.0	39.2	41.4	1.79	1.09	1.65	75.04	42.72	68.28
Windsor.....	38.5	39.7	38.6	1.81	1.25	1.76	69.57	49.73	67.75
Winnipeg.....	42.0	39.1	41.3	1.48	0.88	1.35	62.03	34.37	55.60
Vancouver.....	39.2	37.3	38.9	1.81	1.12	1.71	70.91	41.88	66.43
Industry									
Foods and beverages.....	43.5	38.2	42.0	1.36	0.89	1.24	59.16	33.96	51.88
Meat products.....	41.9	38.0	41.1	1.61	1.18	1.53	67.58	45.03	63.06
Canned and preserved fruits and vegetables.....	44.8	36.2	40.2	1.14	0.79	0.97	51.34	28.59	38.99
Bread and other bakery products.....	45.8	41.6	45.0	1.27	0.76	1.18	58.23	31.74	53.19
Tobacco and tobacco products.....	41.4	39.7	40.3	1.60	1.30	1.42	66.30	51.84	57.14
Rubber products.....	43.6	40.8	43.0	1.62	1.11	1.51	70.87	45.18	65.03
Leather products.....	41.7	39.1	40.6	1.20	0.81	1.04	50.00	31.54	42.04
Textile products (except clothing).....	45.0	40.9	43.5	1.20	0.93	1.11	54.21	38.22	48.36
Cotton yarn and broad woven goods.....	42.7	40.7	42.0	1.18	1.01	1.12	50.37	41.16	47.10
Clothing (textile and fur).....	41.7	38.8	39.6	1.33	0.85	0.98	55.56	32.90	38.96
Men's clothing.....	40.2	38.6	39.0	1.33	0.85	0.98	53.31	32.75	38.35
Women's clothing.....	38.1	36.5	36.8	1.57	0.91	1.03	59.82	33.06	37.95
Knit goods.....	45.3	41.5	42.7	1.24	0.82	0.96	56.22	34.11	41.22
Wood products.....	43.7	40.9	43.5	1.31	1.02	1.30	57.29	41.94	56.38
Saw and planing mills.....	42.7	40.5	42.6	1.39	1.20	1.38	59.16	48.34	58.76
Furniture.....	45.7	41.1	45.3	1.21	1.01	1.20	55.27	41.42	54.16
Paper products.....	43.2	41.0	43.0	1.76	0.96	1.68	76.26	39.17	72.34
Pulp and paper mills.....	42.9	39.6	42.8	1.83	1.05	1.82	78.52	41.59	77.81
Other paper products.....	44.6	41.2	43.5	1.50	0.94	1.32	67.16	38.80	57.52
Printing, publishing and allied trades.....	40.7	38.2	40.1	1.92	0.96	1.73	78.17	36.61	69.35
Iron and steel products.....	42.8	39.9	42.6	1.68	1.19	1.66	71.76	47.59	70.63
Iron castings.....	44.6	41.6	44.6	1.64	1.23	1.64	73.18	51.29	72.84
Machinery manufacturing.....	43.5	39.5	43.2	1.62	1.24	1.59	70.21	49.02	68.91
Primary iron and steel.....	41.5	36.9	41.5	1.86	1.48	1.86	77.35	54.62	77.17
Transportation equipment.....	40.6	38.6	40.5	1.69	1.28	1.67	68.45	49.28	67.82
Aircraft and parts.....	42.1	39.6	42.0	1.75	1.30	1.74	73.61	51.75	72.99
Motor vehicles.....	38.7	24.4	38.6	1.78	1.36	1.77	68.69	33.24	68.53
Motor vehicle parts and accessories.....	40.8	38.7	40.5	1.70	1.32	1.64	69.23	51.90	66.56
Railroad and rolling-stock equipment.....	39.6	--	39.5	1.60	--	1.60	63.19	--	63.17
Shipbuilding and repairing.....	42.5	41.5	42.5	1.62	0.85	1.61	68.67	35.26	68.27
Non-ferrous metal products.....	42.1	40.7	42.0	1.72	0.96	1.67	72.41	39.13	70.02
Smelting and refining.....	41.4	36.0	41.4	1.83	1.21	1.83	75.92	43.72	75.75
Electrical apparatus and supplies.....	43.5	40.2	42.3	1.65	1.20	1.50	71.75	48.15	63.35
Non-metallic mineral products.....	45.3	40.5	45.0	1.50	1.08	1.48	68.06	43.97	66.44
Products of petroleum and coal.....	41.6	--	41.5	1.96	--	1.96	81.71	--	81.44
Chemical products.....	42.0	39.2	41.5	1.63	1.00	1.52	68.31	39.23	63.20
Miscellaneous manufacturing industries.....	44.1	40.6	42.7	1.35	0.87	1.17	59.57	35.29	49.76
Averages, Durable Goods.....	42.5	40.1	42.3	1.60	1.16	1.57	68.07	46.46	66.23
Averages, Non-durable Goods.....	43.0	39.2	41.7	1.52	0.90	1.32	65.18	35.34	54.86
Averages, Manufacturing Industries.....	42.7	39.4	42.0	1.57	0.95	1.44	66.86	37.52	60.53

11.—Average Hours and Earnings of Male and Female Wage Earners for the Last Week of October 1955 and 1956—concluded

Province, Metropolitan Area and Industry	Average Hours Worked			Average Hourly Earnings			Average Weekly Earnings		
	Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
1956									
Province	No.	No.	No.	\$	\$	\$	\$	\$	\$
Newfoundland.....	42.0	33.4	40.9	1.56	0.57	1.46	65.52	19.12	59.89
Nova Scotia.....	41.3	41.0	41.3	1.41	0.63	1.30	58.19	25.88	53.61
New Brunswick.....	44.3	40.4	43.7	1.41	0.73	1.32	62.65	29.36	57.61
Quebec.....	44.5	39.7	43.2	1.52	0.94	1.38	67.56	37.46	59.39
Ontario.....	41.9	39.1	41.3	1.75	1.07	1.62	73.39	41.69	66.87
Manitoba.....	41.7	39.3	41.2	1.57	0.91	1.44	65.65	35.76	59.19
Saskatchewan.....	41.2	37.3	40.7	1.59	1.02	1.53	65.62	38.23	62.13
Alberta.....	41.4	38.6	41.1	1.64	1.11	1.57	67.96	42.72	64.58
British Columbia.....	39.8	36.5	39.5	1.90	1.20	1.83	75.53	43.67	72.39
Totals.....	42.5	39.2	41.8	1.66	1.00	1.53	70.67	39.29	63.97
Metropolitan Area									
Montreal.....	43.9	39.2	42.5	1.60	1.02	1.43	70.24	39.93	61.03
Toronto.....	42.2	38.9	41.3	1.76	1.08	1.59	74.42	42.09	65.66
Hamilton.....	41.6	37.9	40.9	1.94	1.13	1.80	80.86	42.88	73.87
Windsor.....	36.2	39.1	36.5	1.89	1.27	1.82	68.45	49.62	66.47
Winnipeg.....	41.5	39.3	41.0	1.55	0.92	1.41	64.29	36.10	57.79
Vancouver.....	39.2	36.9	38.8	1.90	1.22	1.81	74.49	44.93	70.16
Industry									
Foods and beverages.....	43.2	38.6	41.8	1.44	0.94	1.30	62.35	36.12	54.51
Meat products.....	41.5	38.6	40.9	1.71	1.25	1.62	71.12	48.39	66.39
Canned and preserved fruits and vegetables.....	43.4	35.6	39.3	1.20	0.81	1.01	52.20	28.71	39.73
Bread and other bakery products.....	44.8	40.2	43.9	1.39	0.83	1.29	62.36	33.28	56.56
Tobacco and tobacco products.....	41.5	38.2	39.4	1.69	1.37	1.49	70.10	52.43	58.82
Rubber products.....	43.1	39.9	42.4	1.74	1.14	1.61	74.79	45.47	68.36
Leather products.....	41.7	38.9	40.4	1.24	0.85	1.07	51.92	33.06	43.37
Textile products (except clothing).....	44.7	40.5	43.2	1.27	0.98	1.17	56.89	39.53	50.53
Cotton yarn and broad woven goods.....	42.8	39.8	41.7	1.26	1.08	1.20	53.85	43.16	50.10
Clothing (textile and fur).....	42.3	39.0	39.8	1.41	0.90	1.04	59.78	35.00	41.49
Men's clothing.....	40.6	39.0	39.4	1.41	0.89	1.03	57.27	34.82	40.71
Women's clothing.....	42.3	37.2	37.6	1.71	0.99	1.13	67.16	36.72	42.38
Knit goods.....	45.6	40.6	42.1	1.27	0.85	0.99	57.76	34.52	41.66
Wood products.....	43.4	40.7	43.3	1.36	1.06	1.35	59.19	43.38	58.22
Saw and planing mills.....	42.5	40.6	42.4	1.43	1.21	1.42	60.70	49.08	60.26
Furniture.....	45.5	41.3	45.1	1.28	1.05	1.26	58.01	43.53	56.74
Paper products.....	42.7	40.0	42.4	1.88	1.03	1.80	80.45	41.00	76.38
Pulp and paper mills.....	42.5	38.9	42.5	1.95	1.14	1.94	83.14	44.49	82.35
Other paper products.....	43.5	40.1	42.4	1.58	1.01	1.40	68.90	40.40	59.14
Printing, publishing and allied trades.....	40.9	38.1	40.3	2.01	1.02	1.80	82.19	38.83	72.78
Iron and steel products.....	42.5	39.2	42.4	1.79	1.25	1.76	76.08	49.05	74.85
Iron castings.....	42.6	39.2	42.6	1.71	1.23	1.71	72.98	48.21	72.58
Machinery manufacturing.....	44.5	39.3	44.2	1.69	1.29	1.67	75.31	50.81	73.91
Primary iron and steel.....	41.1	36.0	41.0	2.07	1.71	2.07	85.14	61.72	84.96
Transportation equipment.....	40.9	39.1	40.8	1.80	1.37	1.78	73.43	53.40	72.75
Aircraft and parts.....	42.6	39.6	42.5	1.82	1.35	1.81	77.48	53.57	76.86
Motor vehicles.....	37.9	39.6	37.9	1.94	1.58	1.93	73.39	62.60	73.20
Motor vehicle parts and accessories.....	41.5	38.5	41.1	1.83	1.42	1.78	75.94	54.77	73.07
Railroad and rolling-stock equipment.....	39.5	--	39.4	1.71	--	1.71	67.49	--	67.45
Shipbuilding and repairing.....	44.1	42.6	44.0	1.71	0.85	1.70	75.54	36.22	75.02
Non-ferrous metal products.....	41.7	40.4	41.6	1.79	0.98	1.74	74.82	39.57	72.51
Smelting and refining.....	41.3	--	41.3	1.92	--	1.92	79.35	--	79.27
Electrical apparatus and supplies.....	42.7	39.3	41.7	1.77	1.27	1.62	75.52	49.89	67.73
Non-metallic mineral products.....	44.5	39.9	44.2	1.59	1.17	1.56	70.61	46.83	69.08
Products of petroleum and coal.....	40.6	--	40.6	2.07	--	2.07	84.21	--	83.83
Chemical products.....	42.0	39.2	41.5	1.72	1.06	1.62	72.19	41.70	67.08
Miscellaneous manufacturing industries.....	43.9	40.6	42.5	1.43	0.92	1.22	62.73	37.26	52.06
Averages, Durable Goods.....	42.8	39.6	42.1	1.70	1.22	1.66	71.93	48.33	70.03
Averages, Non-durable Goods.....	42.8	39.1	41.5	1.61	0.95	1.39	68.89	37.18	57.87
Averages, Manufacturing Industries.....	42.5	39.2	41.8	1.66	1.00	1.53	70.67	39.29	63.97

¹ New Westminster included in 1956.

**AVERAGE HOURS AND EARNINGS OF MALE AND FEMALE
WAGE EARNERS BY MAJOR CITIES FOR THE
LAST WEEK OF OCTOBER, 1956**



**12.—Average Hours and Earnings of Male and Female Salaried Employees for
the Last Week of October 1955 and 1956**

(As reported by manufacturers usually employing 15 or more persons.)

Province	Average Hours Worked			Average Weekly Earnings		
	Men	Women	Both Sexes	Men	Women	Both Sexes
1955						
Province	No.	No.	No.	\$	\$	\$
Newfoundland.....	41.6	40.8	41.4	81.87	39.85	73.59
Nova Scotia.....	42.0	38.4	41.1	76.48	37.88	66.43
New Brunswick.....	41.3	38.2	40.5	79.35	37.70	68.26
Quebec.....	39.7	37.9	39.2	91.26	46.74	79.25
Ontario.....	39.3	37.8	38.8	96.52	48.03	82.47
Manitoba.....	40.1	38.2	39.6	81.04	40.76	70.57
Saskatchewan.....	40.7	39.6	40.4	76.35	42.88	66.24
Alberta.....	40.4	38.6	39.9	86.18	43.61	75.60
British Columbia.....	39.8	38.2	39.4	97.12	47.53	85.00
Totals.....	39.6	37.9	39.1	93.50	47.02	80.57

**12.—Average Hours and Earnings of Male and Female Salaried Employees for
the Last Week of October 1955 and 1956—continued**

Metropolitan Area, Industry and Province	Average Hours Worked			Average Weekly Earnings		
	Men	Women	Both Sexes	Men	Women	Both Sexes
	1955—concluded					
Metropolitan Area	No.	No.	No.	\$	\$	\$
Montreal.....	39.1	37.6	38.7	94.20	49.29	81.51
Toronto.....	38.6	37.4	38.2	97.22	50.01	82.65
Hamilton.....	39.0	38.0	38.7	98.70	47.09	83.75
Windsor.....	41.5	39.3	41.0	110.59	55.77	96.49
Winnipeg.....	39.9	38.2	39.5	81.45	41.05	70.69
Vancouver.....	39.2	37.8	38.8	95.60	47.54	81.86
Industry						
Foods and beverages.....	40.6	38.2	39.9	83.50	44.67	73.42
Meat products.....	40.5	38.7	40.2	84.74	49.11	77.82
Canned and preserved fruits and vegetables.....	40.4	38.1	39.7	82.87	44.05	70.63
Bread and other bakery products.....	44.5	39.5	43.0	72.04	40.21	62.41
Tobacco and tobacco products.....	38.0	37.3	37.8	98.20	56.74	84.12
Rubber products.....	39.2	38.3	38.9	86.67	43.95	75.13
Leather products.....	40.8	37.9	39.8	78.49	39.81	66.17
Textile products (except clothing).....	40.9	38.1	40.1	88.74	42.83	75.10
Cotton yarn and broad woven goods.....	39.7	37.9	39.2	85.56	41.30	73.10
Clothing (textile and fur).....	40.8	38.6	39.9	83.18	43.34	66.94
Men's clothing.....	40.2	38.5	39.6	79.40	40.99	65.57
Women's clothing.....	40.5	38.1	39.5	81.24	47.93	66.37
Knit goods.....	42.2	39.1	40.9	84.65	39.42	65.59
Wood products.....	41.8	38.2	40.9	86.58	44.02	76.34
Saw and planing mills.....	42.7	39.3	42.0	87.30	45.10	78.83
Furniture.....	40.5	37.6	39.6	85.74	43.32	72.81
Paper products.....	38.0	37.0	37.7	111.47	49.55	95.20
Pulp and paper mills.....	38.3	37.1	38.0	120.63	52.65	105.15
Other paper products.....	37.5	36.8	37.3	94.02	45.89	78.53
Printing, publishing and allied trades.....	37.9	37.2	37.6	84.02	43.84	68.54
Iron and steel products.....	39.2	37.8	38.9	93.18	46.77	81.53
Iron castings.....	40.1	37.7	39.5	92.01	44.16	79.74
Machinery manufacturing.....	38.9	37.7	38.6	89.07	46.56	77.43
Primary iron and steel.....	39.9	38.2	39.5	105.06	49.19	93.54
Transportation equipment.....	40.5	39.1	40.2	98.30	50.98	87.76
Aircraft and parts.....	39.6	38.9	39.4	98.17	49.21	86.40
Motor vehicles.....	42.6	40.4	42.1	108.26	57.91	97.44
Motor vehicle parts and accessories.....	39.5	38.6	39.3	97.71	51.17	86.04
Railroad and rolling-stock equipment.....	39.8	38.4	39.6	89.72	50.93	84.74
Shipbuilding and repairing.....	40.2	38.0	39.8	85.23	41.97	76.04
Non-ferrous metal products.....	39.1	37.3	38.6	99.21	48.75	86.55
Smelting and refining.....	39.7	38.7	39.6	100.65	50.65	93.45
Electrical apparatus and supplies.....	39.1	38.1	38.8	95.57	50.38	83.39
Non-metallic mineral products.....	40.1	37.5	39.5	92.20	46.97	81.04
Products of petroleum and coal.....	37.1	36.3	36.9	121.46	54.77	105.76
Chemical products.....	38.6	37.7	38.3	96.63	49.53	82.41
Miscellaneous manufacturing industries.....	39.9	37.7	39.1	91.55	45.45	75.26
Averages, Durable Goods.....	39.8	38.1	39.4	94.91	48.52	83.46
Averages, Non-durable Goods.....	39.3	37.7	38.9	92.02	45.87	77.78
Averages, Manufacturing Industries.....	39.6	37.9	39.1	93.50	47.02	80.57
	1956					
Province	No.	No.	No.	\$	\$	\$
Newfoundland.....	40.9	40.3	40.8	87.32	42.00	77.97
Nova Scotia.....	41.3	38.3	40.5	82.64	39.06	71.00
New Brunswick.....	41.5	38.4	40.7	82.30	40.63	70.98

12.—Average Hours and Earnings of Male and Female Salaried Employees for the Last Week of October 1955 and 1956—concluded

Province, Metropolitan Area and Industry	Average Hours Worked			Average Weekly Earnings		
	Men	Women	Both Sexes	Men	Women	Both Sexes
1956—concluded						
	No.	No.	No.	\$	\$	\$
Province—concluded						
Quebec.....	39.4	37.8	39.0	96.89	49.40	84.10
Ontario.....	39.1	37.7	38.7	102.19	50.18	87.14
Manitoba.....	39.9	38.1	39.4	84.24	41.95	73.17
Saskatchewan.....	40.5	39.5	40.2	79.64	45.07	69.51
Alberta.....	40.3	38.9	40.0	91.71	46.77	80.71
British Columbia.....	39.4	38.3	39.2	102.47	49.61	89.54
Totals.....	39.4	37.9	38.9	99.05	49.31	85.23
Metropolitan Area						
Montreal.....	39.0	37.6	38.6	99.97	51.83	86.32
Toronto.....	38.6	37.4	38.2	102.55	52.19	87.12
Hamilton.....	39.3	38.0	38.9	108.97	49.47	91.76
Windsor.....	39.6	38.4	39.3	110.38	58.47	97.38
Winnipeg.....	39.7	38.1	39.3	84.52	42.00	73.10
Vancouver ¹	39.0	38.0	38.7	101.18	49.98	86.88
Industry						
Foods and beverages.....	40.4	38.2	39.8	87.51	47.08	76.93
Meat products.....	40.6	39.7	40.4	87.62	51.24	80.35
Canned and preserved fruits and vegetables.....	40.4	38.2	39.7	87.35	74.52	46.68
Bread and other bakery products.....	44.4	39.5	43.0	74.45	42.48	65.71
Tobacco and tobacco products.....	37.9	37.6	37.8	101.57	56.19	85.50
Rubber products.....	39.1	38.1	38.8	92.31	46.94	79.77
Leather products.....	40.4	37.8	39.6	81.65	42.06	68.91
Textile products (except clothing).....	39.6	37.7	39.1	92.79	44.89	78.29
Cotton yarn and broad woven goods.....	39.3	37.5	38.7	88.42	43.35	75.12
Clothing (textile and fur).....	40.4	38.3	39.5	87.29	45.38	69.75
Men's clothing.....	39.9	38.0	39.2	83.73	42.03	68.01
Women's clothing.....	40.1	38.4	39.3	87.98	51.24	71.06
Knit goods.....	41.4	38.2	40.0	86.89	40.94	67.03
Wood products.....	41.6	38.1	40.8	89.31	45.06	78.87
Saw and planing mills.....	42.5	39.3	41.9	90.06	45.43	81.41
Furniture.....	40.2	37.2	39.3	89.25	44.65	75.54
Paper products.....	37.7	36.8	37.5	117.86	53.03	101.05
Pulp and paper mills.....	37.9	37.0	37.7	127.70	56.47	111.66
Other paper products.....	37.3	36.6	37.1	98.95	48.89	83.08
Printing, publishing and allied trades.....	37.5	37.1	37.3	91.91	46.72	74.50
Iron and steel products.....	39.2	37.7	38.8	99.50	48.75	86.51
Iron castings.....	39.4	37.1	38.8	94.63	45.86	82.11
Machinery manufacturing.....	39.1	37.8	38.7	93.47	47.08	80.64
Primary iron and steel.....	39.8	38.8	39.6	115.98	53.86	102.76
Transportation equipment.....	40.5	39.1	40.2	103.42	53.81	92.25
Aircraft and parts.....	40.5	39.3	40.2	104.06	52.95	92.03
Motor vehicles.....	41.1	39.5	40.7	112.13	60.26	100.54
Motor vehicle parts and accessories.....	39.9	38.8	39.6	102.80	53.13	90.02
Railroad and rolling-stock equipment.....	40.2	39.5	40.1	93.91	49.97	87.88
Shipbuilding and repairing.....	40.3	37.3	39.6	88.88	43.05	79.20
Non-ferrous metal products.....	38.7	37.5	38.4	104.06	50.89	91.28
Smelting and refining.....	39.4	39.2	39.4	105.32	57.06	98.50
Electrical apparatus and supplies.....	39.4	38.4	39.1	102.73	50.74	88.71
Non-metallic mineral products.....	39.6	37.2	39.0	97.73	49.22	85.90
Products of petroleum and coal.....	37.0	36.1	36.8	126.42	57.72	110.54
Chemical products.....	38.1	37.6	38.0	101.85	52.51	87.38
Miscellaneous manufacturing industries.....	38.9	37.4	38.3	95.04	48.29	78.66
Averages, Durable Goods.....	39.8	38.2	39.4	100.61	50.29	88.17
Averages, Non-durable Goods.....	38.9	37.6	38.5	97.37	48.53	82.31
Averages, Manufacturing Industries.....	39.4	37.9	38.9	99.05	49.31	85.23

¹ New Westminster included in 1956.

13.—Proportions of Women Employees and Proportions of their Average Earnings to Men's Earnings for the Last Week of October 1954-56

(As reported by manufacturers usually employing 15 or more persons.)

Province and Group	Wage Earners						Salaried Employees					
	Proportion of Women			Proportion of Women's Wages to Men's			Proportion of Women			Proportion of Women's Salaries to Men's		
	1954	1955	1956	1954	1955	1956	1954	1955	1956	1954	1955	1956
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland.....	10.1	10.5	12.1	34.1	33.9	29.2	20.9	19.7	20.6	46.7	48.7	48.1
Nova Scotia.....	13.7	13.2	14.2	43.9	44.4	44.5	26.3	23.0	26.7	46.4	49.5	47.3
New Brunswick.....	13.2	14.6	15.1	46.6	48.2	46.9	28.0	26.6	27.2	46.2	47.5	49.4
Quebec.....	27.3	27.9	27.2	56.1	55.8	55.4	28.1	27.0	26.9	50.6	51.2	51.0
Ontario.....	20.4	20.6	20.6	58.0	57.8	56.8	29.7	29.0	28.9	48.9	49.8	49.1
Manitoba.....	21.6	21.5	21.6	55.5	53.9	54.5	27.4	26.0	26.2	50.2	50.3	49.8
Saskatchewan.....	12.1	12.9	12.7	57.2	56.5	58.3	32.4	30.2	29.3	55.8	56.2	56.6
Alberta.....	12.2	13.0	13.4	59.1	60.3	62.9	25.9	24.9	24.5	50.4	50.6	51.0
British Columbia.....	10.1	10.5	9.9	56.1	56.8	57.8	24.7	24.4	24.5	48.2	48.9	48.4
Canada¹.....	21.3	21.6	21.4	56.1	56.1	55.6	28.7	27.8	27.8	49.5	50.3	49.8
Durable goods manufacturing...	8.1	8.5	8.1	68.9	68.3	67.2	25.1	24.7	24.7	50.2	51.1	50.0
Non-durable goods manufacturing.....	33.6	34.6	34.8	54.3	54.2	54.0	32.1	30.9	30.8	49.0	49.8	49.8

¹ Includes Prince Edward Island and the Yukon and Northwest Territories.

Data required for the tabulation of the provincial distribution of male and female wage earners and salary earners, classified by earnings group, are secured every third year. The figures for 1953 as compared with 1950 are given in the 1955 Year Book at pp. 790-791. Figures for 1956 may be obtained from the Labour and Prices Division, Dominion Bureau of Statistics.

Section 4.—Wage Rates, Hours of Labour and Other Working Conditions

Statistics on occupational wage rates by industry and region or city, and standard hours of labour are compiled by the Federal Department of Labour and published in the annual report *Wage Rates and Hours of Labour in Canada*. Some of these statistics are also published from time to time in *The Labour Gazette*, the official journal of the Department.

The statistics on wage rates apply to the last normal pay period preceding Oct. 1, and cover about 13,500 establishments. Average wage rates of time workers and average straight-time earnings of piece workers and other incentive workers in a given occupation are shown separately but are combined in the calculation of index numbers. Predominant ranges of rates for each occupation used are also given. Overtime pay is excluded.

The industry index numbers measure changes in wage rates for non-office employees below the rank of foreman. They do not, however, provide a basis for comparing the level of wages in one industry with that in another. More detailed information on concepts and methods of developing these statistics is given in the annual report.

14.—Index Numbers of Average Wage Rates for Certain Main Industrial Groups 1947-56

(1949=100)

NOTE.—Indexes for the years prior to 1949 are conversions of the previous series on the 1939 base. Indexes back to 1901 may be obtained from the Department of Labour publication *Wage Rates and Hours of Labour in Canada, 1956*.

Year	Logging	Coal Mining	Metal Mining	Manufacturing			Con-struction	Steam Rail-ways	Tele-phones	Personal Service	General Average
				Durable Goods	Non-durable Goods	All Manu-facturing					
1947.....	90.2	85.0	87.2	84.9	83.5	84.1	84.1	83.6	87.3	87.4	84.9
1948.....	101.2	98.4	95.7	94.7	94.4	94.5	95.7	100.0	92.7	93.8	95.7
1949.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1950.....	97.0	102.8	106.8	106.6	105.6	106.1	104.8	105.1	104.8	102.9	105.5
1951.....	109.6	111.1	121.6	121.7	118.8	120.3	118.6	121.9	115.7	110.6	119.1
1952.....	133.3	124.0	130.1	130.2	126.5	128.4	128.6	136.8	128.4	117.6	127.7
1953.....	135.5	124.0	132.3	136.3	132.8	134.6	136.2	137.2	136.6	123.3	133.6
1954.....	138.0	123.5	136.7	140.0	136.9	138.5	140.0	137.8	147.6	128.6	137.9
1955.....	138.2	122.8	140.3	143.7	140.7	142.2	145.4	137.8	152.8	132.3	141.7
1956.....	160.8	123.6	150.8	151.2	148.3	149.8	150.7	146.8	157.6	136.1	148.7

15.—Index Numbers of Average Wage Rates by Industry 1953-56

(1949=100)

Industry	1953	1954	1955	1956
Logging	135.5	138.0	138.2	160.8
Eastern Canada.....	135.2	137.8	136.9	163.0
British Columbia, coastal.....	136.9	138.9	143.7	151.2
Mining	129.7	132.6	134.9	142.4
Metal mining.....	132.3	136.7	140.3	150.8
Gold mining.....	120.7	125.4	126.0	141.4
Other metal mining.....	139.4	143.7	149.1	156.6
Coal mining.....	124.0	123.5	122.8	123.6
Manufacturing	134.6	138.5	142.2	149.8
Foods and beverages.....	131.2	135.5	140.3	147.9
Slaughtering and meat packing.....	136.3	138.5	144.2	151.2
Dairy products.....	127.9	132.6	138.1	143.7
Canned and cured fish.....	118.3	124.5	125.8	135.6
Canned and preserved fruits and vegetables.....	121.4	121.2	127.9	133.1
Flour mills.....	143.4	150.0	155.6	158.7
Biscuits and crackers.....	135.9	146.3	149.4	156.5
Bread and other bakery products.....	130.6	134.6	139.4	150.0
Breweries.....	148.1	152.9	157.9	168.6
Confectionery.....	137.2	141.2	145.4	153.7
Tobacco and tobacco products.....	152.0	155.0	160.3	164.8
Rubber products.....	134.9	138.1	139.6	145.0
Leather products.....	129.9	133.1	134.5	143.8
Boots and shoes.....	129.9	133.2	134.2	144.6
Leather tanneries.....	129.9	132.6	135.8	140.5
Textile products (except clothing).....	128.1	129.5	131.0	135.7
Cotton yarn and broad woven goods.....	128.7	129.5	131.5	138.6
Woollen and worsted woven goods and yarn.....	131.6	134.6	137.3	139.7
Synthetic and silk textiles.....	124.3	125.4	125.3	128.1
Clothing (textile and fur).....	124.9	126.8	129.7	136.4
Men's clothing.....	130.3	132.3	134.7	143.4
Men's and boys' suits and overcoats.....	130.0	130.8	133.3	143.4
Men's fine shirts.....	133.0	136.2	136.8	137.8
Work clothing and sportswear.....	129.0	132.8	136.6	147.6
Women's clothing.....	113.4	113.7	121.2	125.0
Women's and misses' coats and suits.....	110.9	119.5	125.2	126.7
Women's and misses' dresses.....	115.0	110.2	118.8	123.9
Hosiery and other knitted goods.....	132.6	137.0	135.0	141.8
Fur goods.....	118.1	118.2	122.4	129.8

15.—Index Numbers of Average Wage Rates by Industry 1953-56—concluded

Industry	1953	1954	1955	1956
Manufacturing—concluded				
Wood products.....	131.4	132.6	136.4	142.9
Sash and door, and planing mills.....	131.7	135.2	138.0	144.4
Sawmills.....	133.4	134.3	138.1	144.6
Wooden furniture.....	126.0	126.8	131.1	137.5
Paper products.....	138.4	145.5	151.7	162.7
Paper boxes and containers.....	131.0	138.2	142.0	149.3
Pulp and paper.....	139.8	146.9	153.6	165.2
Pulp.....	138.9	144.2	150.9	162.0
Newsprint.....	138.5	144.4	151.8	162.7
Paper other than newsprint.....	136.2	147.4	155.1	165.3
Printing, publishing, and allied trades.....	137.3	142.8	146.9	152.5
Printing and publishing other than daily newspapers.....	134.3	139.0	141.6	146.7
Daily newspapers.....	142.4	149.4	155.8	162.5
Iron and steel products.....	139.9	143.3	148.0	156.4
Agricultural implements.....	138.9	142.5	144.6	143.5
Heating and cooking apparatus.....	139.4	145.2	149.3	161.4
Household, office, store and industrial machinery.....	137.8	143.5	147.5	153.5
Iron castings.....	139.2	140.6	145.1	153.9
Machine shop products.....	143.5	148.0	150.4	156.3
Primary iron and steel.....	137.3	140.1	148.9	165.2
Sheet metal products.....	147.5	150.8	150.8	157.9
Transportation equipment.....	134.5	140.0	142.3	149.9
Aircraft and parts.....	141.8	154.2	158.3	163.6
Auto repair and garages.....	137.4	145.1	144.8	155.6
Motor vehicles.....	129.8	130.0	134.1	142.7
Motor vehicle parts and accessories.....	140.5	144.5	147.1	157.4
Railroad and rolling-stock equipment.....	128.4	134.1	137.1	140.2
Shipbuilding and repairing.....	136.2	140.1	144.6	148.0
Brass and copper products.....	142.9	145.4	149.4	153.7
Electrical apparatus and supplies.....	134.6	139.5	142.8	149.5
Heavy electrical machinery and equipment.....	135.6	142.4	143.3	148.9
Radios and radio parts.....	134.1	133.0	138.8	145.3
Refrigerators, vacuum cleaners and miscellaneous electrical products.....	134.5	140.4	143.5	151.0
Clay products.....	138.6	144.7	149.2	161.0
Petroleum refining and products.....	143.4	147.5	154.0	164.0
Chemical products.....	139.6	146.2	150.3	160.2
Acids, alkalis, and salts.....	142.8	147.9	153.2	164.2
Medicinal, pharmaceutical, and toilet preparations.....	135.5	141.4	144.5	155.5
Paints and varnishes.....	141.9	150.9	155.0	162.6
Durable goods ¹	136.3	140.0	143.7	151.2
Non-durable goods ¹	132.8	136.9	140.7	148.3
Construction (buildings and structures only).....	136.2	140.0	145.4	150.7
Transportation, Storage and Communication.....	136.9	140.6	142.9	152.0
Transportation.....	136.9	139.5	141.1	151.0
Railways.....	137.2	137.8	137.8	146.3
Urban and suburban transportation systems.....	135.0	140.2	143.5	153.3
Truck transportation.....	136.7	144.1	149.0	158.3
Water transportation.....	136.4	139.9	142.1	164.7
Storage (terminal grain elevators only).....	137.0	140.2	148.0	154.7
Communication (telephone only).....	136.6	147.6	152.8	157.6
Electric Light and Power.....	145.5	149.7	158.1	169.7
Trade.....	132.2	137.8	142.2	146.2
Wholesale trade.....	135.8	142.8	148.5	157.5
Retail trade.....	130.8	135.8	139.8	141.8
Personal Service.....	123.3	128.6	132.3	136.1
Laundries.....	125.8	132.3	134.0	140.9
Restaurants.....	122.9	128.0	132.0	135.3
General Index, All Industries.....	133.6	137.9	141.7	148.7

¹ These groups are composites of the manufacturing groups listed above. Durable goods include wood products, iron and steel products, transportation equipment, brass and copper products, electrical apparatus and supplies and clay products; non-durable goods include the remaining manufacturing industries.

16.—Hourly Wage Rates for Selected Occupations in Manufacturing by Province, October 1956

(Time Work)

Industry and Occupation	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
	\$	\$	\$	\$	\$	\$	\$	\$
Industrial Machinery—								
Machinist.....	..	..	1.52	1.78	1.68	..	..	2.03
Bench.....	..	..	1.34	1.67	..	..	..	..
Moulder—								
Floor.....	..	..	1.68	1.77	..	..	..	..
Machine.....	..	..	1.15	1.59	..	..	..	..
Newsprint—								
Machine tender.....	3.38 ¹	..	3.30	3.25	..	..	..	3.32
Roll-finisher.....	1.75 ¹	..	1.73	1.72	..	..	..	1.76
Sawmills—								
Edgerman.....	0.99	1.05	1.12	1.31	..	..	1.32	1.84
Lumber grader.....	..	1.06	1.02	1.32	..	..	1.14	1.77
Slaughtering and Meat Packing—								
Butcher.....	..	..	1.70	1.52	1.78	1.63	1.78	1.84
Truck driver.....	1.39 ²	..	1.66	1.63	1.73	1.67	1.69	1.79
Woollen and Worsted Woven Goods and Yarn—								
Woollen spinner, male.....	..	..	0.96	1.06	..	..	..	..
Weaver, female.....	..	..	..	1.07	..	..	..	..

¹ Atlantic Provinces.² Maritime Provinces.

17.—Hourly Wage Rates for Selected Occupations in Certain Cities, Oct. 1, 1956

(Time Work)

Industry and Occupation	Halifax	Montreal	Toronto	Winnipeg	Vancouver
	\$	\$	\$	\$	\$
Construction (buildings and structures only)					
Bricklayer and mason.....	2.02	2.10	2.61	2.25	2.50
Carpenter.....	1.77	1.90	2.40	2.05	2.25
Electrician.....	1.87	2.00	2.65	2.20	2.42
Painter.....	1.53	1.80	2.05	1.80	2.19
Plasterer.....	1.91	2.12	2.45	2.25	2.35
Plumber.....	1.86	2.12	2.44	2.25	2.55
Sheet metal worker.....	1.63	1.90	2.40	2.00	2.35
Labourer.....	1.26	1.30	1.45	1.20	1.66
Manufacturing—					
Labourer, male.....	1.18	1.31	1.45	1.30	1.61
Urban and Suburban Transportation Systems—					
Operator, bus, streetcar, and trolley bus ¹	1.49	1.55 ²	1.71	1.63	1.82
Body repairman streetcar and bus.....	—	1.67	1.86	1.73	1.97
Repairman streetcar and trolley bus.....	1.57	1.62	1.80	1.68	1.91
Electrician.....	1.68	1.66	1.83	1.73	1.96
Labourer.....	1.38	1.29	1.50	1.30	1.62
Printing, Publishing and Allied Trades—					
Daily Newspapers—					
Compositor, hand and linotype operator.....	2.40	2.81	3.01	1.99	2.63
Pressman.....	2.27	2.70	3.01	1.94	2.63
Other than Daily Newspapers—					
Bindery worker, hand, female.....	0.67	1.03	1.12	0.96	1.36
Compositor, hand.....	1.52	2.18	2.33	1.91	2.31
Linotype operator.....	—	2.25	2.32	1.93	2.30
Pressman, cylinder.....	1.32	2.08	2.22	1.89	2.30
Pressman, platen.....	1.27	1.91	2.12	1.85	2.15
Pressman offset.....	—	2.46	2.52	2.00	2.44

¹ Maximum rates based on length of service.² Operators of two-man streetcars excluded.

18.—Average Standard or Normal Hours of Labour per Week for Employees in Selected Industries by Province 1952-56

Industry and Year	Atlantic Provinces ¹	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia
	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Work clothing.....1952 ²	43.6	45.0	41.0	40.0	..	40.0	42.7
.....1953 ²	43.8	43.6	41.1	40.4	..	40.0	40.0
.....1954	44.0	44.2	40.9	40.0	..	40.0	40.9
.....1955	44.0	43.1	40.7	40.0	..	..	40.5
.....1956	41.7	43.4	40.8	40.0	..	40.0	40.4
Pulp and paper.....1952 ²	47.0	48.2	42.8	40.0	..	..	40.0
.....1953 ²	44.2	46.4	41.3	..	..	..	40.0
.....1954	41.1	41.6	40.6	40.0	..	..	40.0
.....1955	41.3	40.7	40.5	..	..	..	40.0
.....1956	41.3	40.7	40.6	..	..	..	40.0
Wood products.....1952 ²	50.4	51.7	46.2	44.2	44.0	45.7	40.6
.....1953 ²	49.9	50.7	45.7	45.3	45.4	46.1	40.4
.....1954	51.0	51.2	46.0	44.2	44.0	45.5	40.7
.....1955	50.2	50.0	45.8	44.2	44.0	44.7	40.6
.....1956	50.1	50.0	45.4	44.2	44.0	44.8	40.3
Meat products.....1952 ²	40.8	42.5	41.6	40.1	40.6	40.1	40.0
.....1953 ²	41.4	41.7	41.8	40.1	40.4	40.0	40.0
.....1954	40.9	42.0	41.5	40.2	40.3	40.0	40.0
.....1955	40.6	41.9	41.8	40.3	40.3	40.0	40.0
.....1956	40.4	41.6	41.9	40.2	40.2	40.0	40.0
Iron and its products.....1952 ²	41.7	44.8	41.4	43.8	44.0	43.1	40.1
.....1953 ²	41.0	44.3	41.4	44.3	44.0	41.7	40.8
.....1954	40.7	43.2	41.0	43.7	42.8	41.6	40.1
.....1955	40.6	43.2	40.9	42.8	42.3	41.2	40.2
.....1956	40.4	43.0	40.8	41.2	41.0	41.5	40.1
Woollen yarn and cloth.....1952 ²	46.1	47.5	45.1	45.3	45.3	45.3	45.3
.....1953 ²	46.3	46.6	45.7	42.2	..	..	42.2
.....1954	44.2	45.9	45.3	42.5	..	..	42.3
.....1955	43.8	46.5	44.7	40.3	..	..	42.3
.....1956	43.8	46.4	44.7	41.1	..	..	42.3

¹ Exclusive of Newfoundland.² Male employees only.

19.—Summary of Working Conditions of Plant Employees in Manufacturing Industries as at Apr. 1, 1953-56

SOURCE: Annual Survey of Working Conditions, Economics and Research Branch, Department of Labour.

Item	Apr. 1, 1953	Apr. 1, 1954	Apr. 1, 1955	Apr. 1, 1956
Coverage.....No.	802,000	803,000	765,000	800,000
PERCENTAGES OF PLANT EMPLOYEES				
Standard Weekly Hours—				
40 and under.....	43.3	52.8	57.9	62.1
Over 40 and under 44.....	15.3	13.9	11.5	11.2
44.....	10.1	7.7	6.8	5.8
45.....	15.4	12.5	11.2	9.5
Over 45 and under 48.....	2.0	1.7	1.8	1.7
48.....	9.6	7.2	7.1	6.0
Over 48.....	4.3	4.2	3.7	3.7
Employees on a five-day week.....	78.5	82.5 ¹	83.9 ¹	85.5 ¹

For footnote, see end of table.

19.—Summary of Working Conditions of Plant Employees in Manufacturing Industries as at Apr. 1, 1953-56—concluded

Item	Apr. 1, 1953	Apr. 1, 1954	Apr. 1, 1955	Apr. 1, 1956
	PERCENTAGES OF PLANT EMPLOYEES			
Premium Rates—				
Employees in establishments where higher than straight-time rates are paid after daily or weekly hours.....	93.4	..	..	..
Employees in establishments where time and one-half is paid after daily or weekly hours.....	92.2	..	88.6	..
Shift Differentials—				
Employees in establishments where shift work is performed	71.0	..	78.0 ²	..
Employees in establishments where shift differentials are paid	66.2	..	68.6	..
Paid Statutory Holidays—				
Employees receiving paid statutory holidays.....	94.7	93.6	94.4	93.8
Employees being paid for the following number of statutory holidays—				
1 to 5.....	17.0	17.2	14.3	11.8
6.....	14.5	13.1	12.6	8.4
7.....	12.6	11.3	11.2	12.0
8.....	41.4	43.4	47.3	51.5
More than 8.....	9.2	8.6	9.0	10.1
Vacations with Pay—				
Eligible for at least one week with pay.....	99.3	99.2	99.7	..
One week with pay.....	91.1	89.3	90.3	90.0
After one year or less.....	87.3	85.8	89.3	89.1
Service not specified.....	3.8	3.5	1.0	0.9
Eligible for two weeks with pay.....	92.6	92.0	92.4	92.3
After: 1 year or less.....	14.9	15.5	15.6	15.5
2 years.....	9.6	10.3	11.4	11.5
3 years.....	22.5	25.5	27.0	27.9
5 years.....	40.4	35.2	34.7	33.7
Other.....	5.2	5.5	3.7	3.7
Eligible for three weeks with pay.....	50.8	53.6	60.0	62.9
After: 15 years.....	28.8	36.9	43.7	47.0
20 years.....	10.9	6.9	6.4	5.6
Other.....	11.1	9.8	9.9	10.3
Eligible for four weeks with pay.....	4.0	5.0	6.8	10.2
After: 25 years.....	3.3	4.1	5.8	7.6
Other.....	0.7	0.9	1.0	2.6
Other vacation periods.....	0.9	..	..	..
Shutdown for Vacation—				
Employees in establishments reporting a shutdown period	61.5	58.9	..	..
Employees in establishments reporting a shutdown period of two weeks.....	47.6	46.9	..	..
Rest Periods—				
Employees in establishments reporting rest periods.....	..	61.7	..	65.7
Employees in establishments receiving two periods of 10 minutes each.....	..	42.7	..	42.7
Sick Leave—				
Employees in establishments reporting a provision for sick leave.....	12.7	..	..	..

¹ Includes a small number of employees in plants reporting alternate weeks of 5 and 5½ days.
² Establishments accounting for 63 p.c. of the employees reported regular shift work; in those employing 15 p.c., shifts were worked occasionally.

20.—Summary of Working Conditions of Office Employees in Manufacturing Industries as at Apr. 1, 1953-56

SOURCE: Annual Survey of Working Conditions, Economics and Research Branch, Department of Labour.

Item	Apr. 1, 1953	Apr. 1, 1954	Apr. 1, 1955	Apr. 1, 1956
Coverage.....No.	183,000	196,000	196,000	205,000
PERCENTAGES OF OFFICE EMPLOYEES				
Standard Weekly Hours—				
Under 37½.....	19.4	21.0	21.9	21.9
37½.....	30.1	34.9	38.2	40.8
Over 37½ and under 40.....	19.1	15.0	12.0	9.6
40.....	21.2	21.0	20.0	21.2
Over 40.....	10.2	8.1	7.9	6.5
Employees on a five-day week.....	84.1	88.5 ¹	89.1 ¹	90.9 ¹
Compensation for Overtime Work—				
Employees in establishments reporting—				
Compensating time off.....	11.8	..	..	..
Remuneration of straight-time rates.....	21.4	..	..	..
Remuneration at higher than straight-time rates.....	21.1	..	..	..
Meal allowances ²	41.4	..	..	..
Other provisions.....	2.1	..	..	..
Paid Statutory Holidays—				
Employees receiving paid statutory holidays.....	99.5	98.9	99.1	99.0
Employees being paid for the following number of statutory holidays—				
1 to 6.....	6.9	6.5	6.8	4.2
7.....	12.2	11.4	10.7	9.7
8.....	57.4	61.0	61.1	60.8
9.....	16.1	13.6	14.9	17.5
More than 9.....	6.9	6.4	5.6	6.8
Vacations with Pay—				
Eligible for at least one week with pay.....	99.7	99.8	100.0	100.0
After 1 year or less.....	56.1	65.0	69.4	69.4
Service not specified.....	6.8	1.8	0.8	0.3
Eligible for two weeks with pay.....	97.7	96.0	98.6	98.7
After: 1 year or less.....	88.5	87.0	89.3	90.1
2 years.....	4.6	5.0	5.3	5.2
3 years.....	0.7	0.8	1.0	0.9
5 years.....	1.9	1.6	1.3	2.0
Other.....	2.0	1.6	1.7	0.5
Eligible for three weeks with pay.....	60.6	63.8	69.4	71.9
After: 10 years or fewer.....	4.0	5.4	5.4	10.3
15 years.....	32.1	43.4	51.0	51.3
20 years.....	14.5	7.2	6.7	5.5
Other.....	10.0	7.8	6.3	4.8
Eligible for four weeks with pay.....	4.4	5.5	7.6	12.9
After: 25 years.....	3.2	4.2	6.1	9.1
Other.....	1.2	1.3	1.5	3.8
Other vacation periods.....	0.1	..	..	..
Sick Leave—				
Employees in establishments reporting a provision for sick leave.....	93.7	..	93.4	..
Group Sickness or Accident Insurance Plan—				
Employees in establishments reporting a group sickness or accident insurance plan.....	..	..	..	..
Group Life Insurance—				
Employees in establishments reporting group life insurance..	..	87.4	90.1	90.5
Pension Plan—				
Employees in establishments reporting a pension plan.....	64.3	71.7	74.4	78.4

¹ Includes a small number of employees in establishments reporting alternate weeks of 5 and 5½ days. ² Meal allowances are sometimes reported as given in addition to other types of overtime compensation; or as the sole type of overtime compensation.

Wages of Farm Labour.—Wage rates for farm help have been increasing slightly over the past few years. Moderate gains were recorded in 1952 and 1953 and after levelling off in 1954 and 1955 the upward trend was resumed in 1956. The information on farm wages is provided by volunteer farm correspondents located in all provinces except Newfoundland.

21.—Average Daily and Monthly Wages of Male Farm Help as at Jan. 15, May 15 and Aug. 15, 1952-56

NOTE.—Figures from 1940 are given in the corresponding table of previous Year Books beginning with the 1943-44 edition.

Province and Year	January 15				May 15				August 15			
	Daily		Monthly		Daily		Monthly		Daily		Monthly	
	With Board	Without Board	With Board	Without Board	With Board	Without Board	With Board	Without Board	With Board	Without Board	With Board	Without Board
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Maritimes—												
1952.....	4.30	5.40	89.00	118.00	4.30	5.30	92.00	121.00	4.50	5.60	91.00	122.00
1953.....	4.30	5.20	86.00	114.00	4.30	5.30	87.00	115.00	4.60	5.50	85.00	118.00
1954.....	4.30	5.40	89.00	120.00	4.20	5.10	87.00	111.00	4.50	5.60	92.00	123.00
1955.....	4.40	5.40	86.00	114.00	4.50	5.40	92.00	116.00	4.80	5.70	98.00	123.00
1956.....	4.60	5.60	90.00	118.00	4.80	5.70	96.00	119.00	5.00	5.90	102.00	125.00
Quebec—												
1952.....	4.70	5.70	96.00	129.00	4.60	5.70	95.00	132.00	5.10	6.20	101.00	136.00
1953.....	4.70	5.70	90.00	125.00	4.80	6.00	95.00	127.00	5.10	6.40	97.00	131.00
1954.....	4.60	5.90	93.00	128.00	4.60	5.80	91.00	125.00	4.80	6.00	94.00	127.00
1955.....	4.60	5.90	91.00	125.00	4.60	5.90	92.00	126.00	5.10	6.20	96.00	131.00
1956.....	4.70	5.90	92.00	123.00	5.10	6.30	100.00	135.00	5.50	6.80	108.00	147.00
Ontario—												
1952.....	4.70	5.90	87.00	121.00	4.80	5.90	88.00	121.00	5.40	6.60	91.00	124.00
1953.....	4.90	6.20	83.00	119.00	5.10	6.30	90.00	123.00	5.60	7.10	93.00	128.00
1954.....	4.90	6.20	84.00	118.00	5.00	6.20	87.00	118.00	5.40	6.80	88.00	125.00
1955.....	4.90	6.10	84.00	115.00	5.20	6.60	91.00	123.00	5.50	6.80	90.00	125.00
1956.....	5.20	6.60	86.00	126.00	5.50	6.80	96.00	131.00	6.00	7.60	104.00	138.00
Manitoba—												
1952.....	4.40	5.40	80.00	107.00	5.10	6.40	102.00	134.00	6.20	7.90	107.00	141.00
1953.....	4.50	5.50	76.00	108.00	5.30	6.90	105.00	140.00	6.00	8.10	110.00	141.00
1954.....	4.60	5.50	78.00	110.00	5.00	6.20	104.00	135.00	5.90	7.20	105.00	130.00
1955.....	4.20	5.80	75.00	114.00	5.10	6.70	99.00	127.00	5.80	7.10	102.00	128.00
1956.....	4.60	6.80	78.00	116.00	5.50	6.90	110.00	148.00	6.40	7.70	116.00	151.00
Saskatchewan—												
1952.....	4.10	5.30	75.00	114.00	5.40	6.60	113.00	146.00	7.30	8.30	119.00	151.00
1953.....	4.70	6.10	81.00	117.00	6.00	7.50	122.00	148.00	6.60	8.10	124.00	152.00
1954.....	4.90	6.10	80.00	111.00	5.80	7.50	118.00	145.00	5.90	7.50	120.00	148.00
1955.....	4.30	5.80	74.00	109.00	5.40	6.80	116.00	141.00	6.20	7.90	118.00	151.00
1956.....	4.70	6.40	77.00	115.00	5.80	6.90	120.00	150.00	6.60	8.20	127.00	159.00
Alberta—												
1952.....	4.50	5.50	91.00	125.00	5.70	6.90	112.00	145.00	7.00	8.10	118.00	155.00
1953.....	5.20	6.20	96.00	131.00	6.20	7.60	115.00	154.00	6.50	8.10	122.00	156.00
1954.....	5.50	6.80	97.00	135.00	5.70	7.30	115.00	148.00	6.10	7.40	117.00	152.00
1955.....	4.70	6.00	93.00	125.00	5.50	7.30	112.00	145.00	6.10	7.50	115.00	151.00
1956.....	5.00	6.60	94.00	130.00	6.30	7.70	122.00	160.00	6.60	8.00	123.00	157.00
British Columbia—												
1952.....	6.60	7.90	92.00	146.00	5.90	7.20	107.00	152.00	6.40	7.40	112.00	145.00
1953.....	6.80	8.60	110.00	146.00	6.12	7.90	108.00	160.00	5.75	7.00	110.00	146.00
1954.....	6.20	8.30	99.00	140.00	5.90	7.50	111.00	156.00	6.80	8.00	120.00	159.00
1955.....	6.00	8.00	100.00	140.00	6.60	7.90	114.00	153.00	6.70	8.00	115.00	160.00
1956.....	6.20	8.00	101.00	147.00	6.60	7.90	115.00	154.00	7.60	8.50	120.00	165.00
Totals—												
1952.....	4.60	5.70	88.00	121.00	4.90	6.00	101.00	135.00	5.60	6.70	105.00	139.00
1953.....	4.70	5.80	87.00	122.00	5.00	6.20	105.00	138.00	5.50	6.80	107.00	140.00
1954.....	4.60	5.90	88.00	122.00	4.80	6.00	102.00	133.00	5.10	6.40	106.00	139.00
1955.....	4.60	5.80	85.00	119.00	4.99	6.10	103.00	133.00	5.40	6.60	103.00	136.00
1956.....	4.80	6.10	86.00	123.00	5.30	6.40	108.00	142.00	5.80	7.00	115.00	149.00

Section 5.—Unemployment Insurance

The Unemployment Insurance Act, which came into operation on July 1, 1941, applies to all persons employed under a contract of service, except the following: employment in specified industries or occupations such as agriculture, horticulture, forestry (effective Jan. 1, 1956, coverage was also extended to certain employments in these three industries); the Canadian Armed Forces; the permanent public service of the Federal Government; provincial government employees except where insured with the concurrence of the government of the province; certified permanent employees of municipal or public authorities; private domestic service; private duty nursing; teaching; certain director-officers of corporations; workers on other than an hourly, daily or piece rate, earning more than \$4,800 a year unless they elect to continue as insured persons; employees in a charitable institution or in a hospital not carried on for purpose of gain except where the institution or hospital consents to insure certain groups or classes of persons with the concurrence of the Commission. All persons paid by the hour, day, or at a piece-rate (including a milage rate) are insured regardless of amount of earnings, together with all employees who receive \$4,800 or less at weekly, monthly, yearly or commission rates.

Unemployment Insurance Fund.—Employers and employees contribute to the Unemployment Insurance Fund, the total paid by each group being equal. The Federal Government contributes an amount equal to one-fifth of the combined employer-employee contributions and assumes the cost of administration. From July 1, 1941 to Mar. 31, 1956, employers and employees contributed \$1,569,863,590 to the Fund and the Federal Government added \$313,982,080. Interest and profit on sale of securities amounted to \$197,095,791 and fines of \$250,318 made a total revenue of \$2,081,191,779.

Benefits first became payable on Jan. 27, 1942, and from that date to Mar. 31, 1956, total benefit payments amounted to \$1,226,993,261, leaving a balance of \$854,198,519 in the Fund. Reserves of the Fund are invested in Government of Canada bonds and, as at Mar. 31, 1956, the par value of bonds held amounted to \$853,253,000.

WEEKLY RATES OF CONTRIBUTION AND BENEFIT UNDER THE UNEMPLOYMENT INSURANCE ACT, EFFECTIVE OCT. 2, 1955

Range of Earnings	Weekly Contributions ¹		Value of Weekly Stamp ²	Range of Average Weekly Contributions	Weekly Rate of Benefit ³	
	Employer	Employee			Person Without Dependant	Person With Dependant
	cts.	cts.	cts.	cts.	\$	\$
Less than \$ 9.00 ⁴	8	8	16	Less than 20.....	6	8
\$ 9.00 to \$14.99.....	16	16	32	20 and under 27.....	9	12
\$15.00 to \$20.99.....	24	24	48	27 " " 33.....	11	15
\$21.00 to \$26.99.....	30	30	60	33 " " 39.....	13	18
\$27.00 to \$32.99.....	36	36	72	39 " " 45.....	15	21
\$33.00 to \$38.99.....	42	42	84	45 " " 50.....	17	24
\$39.00 to \$44.99.....	48	48	96	50 " " 54.....	19	26
\$45.00 to \$50.99.....	52	52	1.04	54 " " 58.....	21	28
\$51.00 to \$56.99.....	56	56	1.12	58 to 60.....	23	30
\$57.00 or over.....	60	60	1.20			

¹ The weekly contribution is based on actual earnings in the week irrespective of the number of days in which the earnings are obtained.

² Unemployment insurance stamps combine both employer and employee contributions.

³ Rates calculated on the average weekly contributions for the last 30 weeks in the 104 weeks preceding claim. Since Oct. 2, 1955, a claimant to qualify for benefit must have at least 30 weekly contributions in the last 104 weeks prior to claim; 8 weeks must be in the last 52 weeks. (These periods of 104 weeks and 52 weeks may be extended under certain circumstances.)

⁴ Employees earning less than \$9 in a week receive one-half of a 32-cent stamp (8 cents from the employer and 8 cents from the employee).

The duration of benefit is related to the contribution history—one week's benefit for every two weeks' contributions in the past 104 weeks with a maximum of 36 weeks. The rate of benefit is determined by the average of the contributions in the past 30 weeks. No benefit is payable in a benefit period until a claimant has served a waiting period equivalent to one full week's benefit.

Disqualifications for benefit include: loss of work owing to a labour dispute in which the contributor is participating or directly interested; unwillingness to accept suitable employment; being an inmate of any prison or any institution supported out of public funds; refusal to attend a course of instruction or training if directed to do so; residence outside Canada unless otherwise prescribed. Disqualification of a claimant for a period not exceeding six weeks may be imposed if an employee is discharged by reason of his own misconduct or leaves the employment voluntarily without just cause or refuses suitable employment.

Seasonal benefit is payable in the period Jan. 1 to Apr. 15 to certain claimants whose benefits have been exhausted or who have insufficient contributions to qualify for regular benefit.

22.—Persons Insured under the Unemployment Insurance Act by Industrial Group and Sex 1955 and 1956

NOTE.—Based on a 10-p.c. sample of contributors and claimants at June 1.

Industry	1955		1956	
	Male	Female	Male	Female
	No.	No.	No.	No.
Agriculture	3,560	580	5,750	650
Forestry and Logging	74,690	1,650	122,450	3,020
Fishing, Hunting and Trapping	310	1	670	30
Mining, Quarrying and Oil Wells	94,720	3,840	100,840	3,970
Metal mining.....	49,610	1,240	58,500	1,720
Fuels.....	26,940	1,290	24,480	860
Non-metal mining.....	9,980	150	8,320	260
Quarrying, clay and sand pits.....	4,030	140	4,620	110
Prospecting.....	4,160	1,020	4,920	1,020
Manufacturing	911,580	272,940	920,680	298,250
Foods and beverages.....	110,560	40,690	113,850	49,500
Tobacco and tobacco products.....	3,200	4,870	3,770	5,360
Rubber products.....	15,280	4,810	15,410	5,040
Leather products.....	16,170	11,710	15,500	12,820
Textile products, except clothing.....	38,930	22,500	36,130	22,890
Clothing.....	32,070	67,070	29,500	70,880
Wood products.....	104,840	9,070	106,430	9,720
Paper products.....	72,700	12,090	72,770	12,940
Printing, publishing and allied trades.....	37,360	17,190	37,110	18,260
Iron and steel products.....	154,470	17,540	158,250	18,000
Transportation equipment.....	136,220	11,100	138,330	12,160
Non-ferrous metal products.....	47,110	6,410	46,180	6,980
Electrical apparatus and supplies.....	46,650	20,020	49,240	22,820
Non-metallic mineral products.....	31,930	3,570	34,790	4,320
Products of petroleum and coal.....	10,410	940	10,670	1,040
Chemical products.....	37,450	13,470	36,250	13,770
Miscellaneous manufacturing.....	16,230	9,890	16,500	11,750
Construction	262,980	7,960	369,040	9,140
General contractors.....	174,320	4,650	262,980	5,550
Subcontractors.....	88,660	3,310	106,060	3,590
Transportation, Storage and Communication	269,150	50,510	281,280	54,760
Transportation.....	236,210	15,280	248,830	17,560
Storage.....	12,800	2,160	10,970	1,660
Communication.....	20,040	33,070	21,480	35,540
Public Utility Operation	35,840	5,040	34,260	5,510
Trade	365,040	210,260	365,670	242,410
Wholesale.....	129,680	40,540	121,460	42,190
Retail.....	226,360	169,720	244,210	200,220
Finance, Insurance and Real Estate	47,130	76,880	46,860	48,080

¹ Less than an estimated 100 persons.

22.—Persons Insured under the Unemployment Insurance Act by Industrial Group and Sex 1955 and 1956—concluded

Industry	1955		1956	
	Male	Female	Male	Female
	No.	No.	No.	No.
Service.....	242,140	170,300	268,470	205,070
Community.....	15,730	17,990	19,280	23,630
Government.....	116,330	30,950	119,840	31,040
Recreation.....	10,680	6,560	14,170	7,450
Business.....	28,490	22,860	32,230	28,880
Personal.....	70,910	91,940	82,950	117,070
Unspecified.....	11,120	3,370	23,980	8,420
Claimants.....	99,860	44,480	178,460	89,610
Totals, All Industries.....	2,409,120	847,820	2,718,410	1,007,920

23.—Persons Establishing Regular Benefit Periods, Benefit Periods Terminated, and Duration and Amount of Benefit Paid, by Province 1955 and 1956

NOTE.—Based on a 25-p.c. sample.

Province	Persons Establishing Benefit Periods	Benefit Periods Terminated	Duration of Benefit ¹		Amount of Benefit Paid
			Complete Weeks	Partial Weeks	
	No.	No.	No.	No.	\$
1955					
Newfoundland.....	21,080	24,732	50,764	12,100	6,109,056
Prince Edward Island.....	3,972	4,596	11,072	2,540	995,316
Nova Scotia.....	40,840	41,676	98,920	35,018	9,448,921
New Brunswick.....	35,132	39,196	77,124	26,656	8,962,840
Quebec.....	273,084	311,040	690,984	198,532	69,340,180
Ontario.....	280,848	333,840	749,452	216,548	71,092,308
Manitoba.....	36,856	42,592	120,568	29,764	9,668,732
Saskatchewan.....	24,232	25,508	80,400	16,260	5,940,936
Alberta.....	46,392	51,272	98,804	33,000	10,432,780
British Columbia.....	86,932	103,440	234,676	83,528	21,050,280
Totals, 1955.....	849,368	977,892	2,212,764 ²	653,976 ²	213,041,352
1956					
Newfoundland.....	22,548	19,032	252,024	32,792	5,636,232
Prince Edward Island.....	4,280	3,512	49,424	6,516	933,748
Nova Scotia.....	38,348	38,004	374,476	90,852	8,054,996
New Brunswick.....	36,396	30,456	359,656	61,736	7,607,632
Quebec.....	267,028	251,580	2,759,016	427,884	57,458,096
Ontario.....	267,264	272,164	2,470,212	447,304	52,179,184
Manitoba.....	38,856	34,896	414,428	64,208	8,419,372
Saskatchewan.....	24,208	22,808	284,356	35,296	5,897,468
Alberta.....	44,032	44,320	393,704	92,148	8,655,628
British Columbia.....	91,464	84,516	748,244	151,036	16,321,956
Totals, 1956.....	834,424	801,288	8,105,540	1,409,772	171,164,312

¹ For January to September in 1955 duration was calculated on a 'day' basis. Total number of days for that period was 52,408,092.

² October to December only.

24.—Number of Regular Benefit Periods Terminated during 1955 and 1956 classified by Amount of Benefit Authorized and Paid

NOTE.—Based on a 25-p.c. sample.

Amount of Benefit	1955		1956	
	Authorized	Paid	Authorized	Paid
	No.	No.	No.	No.
\$ 0.....	—	81,408	—	88,016
\$ 1- \$19.....	17,552	41,080	5,084	40,172
\$ 20- \$ 39.....		47,240		47,800
\$ 40- \$ 59.....		43,652		42,124
\$ 60- \$ 79.....		46,500		39,748
\$ 80- \$ 99.....	20,992	48,796	6,356	37,116
\$100- \$119.....	28,236	50,820	8,728	34,916
\$120- \$139.....	28,764	49,044	9,584	33,524
\$140- \$159.....	35,260	52,248	12,572	31,680
\$160- \$179.....	33,468	47,476	15,068	30,764
\$180- \$199.....	32,840	44,056	16,712	30,144
\$200- \$219.....	34,532	43,744	17,196	27,616
\$220- \$239.....	32,652	38,980	20,576	27,264
\$240- \$259.....	30,500	35,944	23,660	26,756
\$260- \$279.....	28,384	31,864	22,520	24,260
\$280- \$299.....	27,744	28,904	22,336	21,964
\$300- \$319.....	27,008	26,744	23,892	21,388
\$320- \$339.....	24,016	22,224	24,324	20,300
\$340- \$359.....	24,184	20,764	23,164	16,992
\$360- \$379.....	22,700	18,540	24,728	17,436
\$380- \$399.....	21,160	16,420	28,200	17,624
\$400- \$449.....	49,660	32,960	55,688	32,248
\$450- \$499.....	44,896	23,820	55,140	24,096
\$500- \$549.....	41,768	18,348	54,764	16,856
\$550- \$599.....	39,536	13,124	37,044	9,888
\$600- \$649.....	37,796	10,672	43,580	8,276
\$650- \$699.....	35,664	7,984	33,212	5,508
\$700- \$749.....	34,844	6,920	27,016	4,020
\$750- \$799.....	32,428	5,160	30,980	4,180
\$800- \$899.....	52,148	7,556	53,076	5,756
\$900- \$999.....	36,692	4,576	31,576	2,928
\$1,000 or over.....	102,468	10,324	74,512	9,928
Totals.....	977,892	977,892	801,288	801,288

25.—Regular Benefit Periods Terminated during 1955 and 1956 and Duration of Benefit Paid, classified by Weekly Rate of Benefit Authorized and Dependency Status

NOTE.—Based on a 25-p.c. sample. Rates of contribution and benefit were revised effective Oct. 2, 1955.

Dependency Status and Weekly Rate of Benefit	1955			1956		
	Benefit Periods Terminated	Duration of Benefit ¹		Benefit Periods Terminated	Duration of Benefit	
		Complete Weeks	Partial Weeks		Complete Weeks	Partial Weeks
	No.	No.	No.	No.	No.	No.
With Dependents.....	475,596	1,125,992	347,296	389,860	3,969,456	748,188
Under \$8.....	64	272	36	...	...	...
\$ 8.....	400	988	108	380	5,636	1,032
\$12.....	1,976	5,564	884	1,596	23,184	3,332
\$15.....	5,676	14,664	3,760	4,784	70,344	8,648
\$18.....	16,268	36,804	10,768	13,392	178,216	28,156
\$21.....	102,244	223,240	63,352	68,940	787,080	142,524
\$24.....	348,968	844,460	268,388	239,032	2,216,716	505,740
\$26.....	...	...	...	18,336	208,516	16,928
\$28.....	...	...	...	15,588	188,544	16,332
\$30.....	...	...	...	27,812	293,220	25,496

For footnotes, see end of table, p. 786.

25.—Regular Benefit Periods Terminated during 1955 and 1956 and Duration of Benefit Paid, classified by Weekly Rate of Benefit Authorized and Dependency Status—concluded

Dependency Status and Weekly Rate of Benefit	1955			1956		
	Benefit Periods Terminated	Duration of Benefit ¹		Benefit Periods Terminated	Duration of Benefit	
		Complete Weeks	Partial Weeks		Complete Weeks	Partial Weeks
	No.	No.	No.	No.	No.	No.
Without Dependents	502,296	1,086,772	306,680	411,428	4,136,084	661,584
Under \$6.....	196	752	148	...	...	...
\$ 6.....	2,800	5,804	1,368	2,152	26,852	2,928
\$ 9.....	22,000	41,204	10,396	16,988	191,964	25,696
\$11.....	45,400	92,040	27,052	36,828	389,652	61,520
\$13.....	75,076	154,996	49,544	59,220	607,984	103,196
\$15.....	157,944	332,728	92,476	118,024	1,204,808	197,908
\$17.....	198,880	459,248	125,696	143,504	1,316,472	245,628
\$19.....	...	...	...	12,336	138,460	9,012
\$21.....	...	...	...	10,196	123,708	7,288
\$23.....	...	...	...	12,180	136,184	8,408
Totals	977,892	2,212,764¹	653,976¹	801,288	8,105,540	1,409,772

¹ October to December only; for January to September duration was calculated on a 'day' basis. Total number of days for that period was 52,408,092.

26.—Regular Benefit Periods Terminated during 1955 and 1956 and Duration of Benefit Paid classified by Age of Claimant

NOTE.—Based on a 25-p.c. sample.

Age Group	Benefit Periods Terminated	Duration of Benefit ¹		Benefit Periods Terminated	
		Complete Weeks	Partial Weeks	Lapsed	Exhausted
	No.	No.	No.	No.	No.
1955					
Under 20 years.....	40,832	49,512	23,348	20,200	20,632
20 - 24 ".....	168,056	311,788	95,360	114,736	53,320
25 - 29 ".....	158,220	324,112	96,660	116,356	41,864
30 - 34 ".....	129,192	277,184	91,528	93,980	35,212
35 - 39 ".....	100,852	214,468	71,568	71,984	28,868
40 - 44 ".....	93,024	201,904	67,856	64,444	28,580
45 - 49 ".....	79,532	186,484	60,264	53,956	25,576
50 - 54 ".....	65,172	154,864	48,780	43,116	22,056
55 - 59 ".....	49,372	132,664	35,008	30,440	18,932
60 - 64 ".....	34,892	107,552	23,132	19,552	15,340
65 - 69 ".....	30,804	144,172	20,468	15,072	15,732
70 and over.....	18,156	86,784	12,252	7,228	10,928
Unspecified.....	9,788	21,276	7,752	7,340	2,448
Totals, 1955	977,892	2,212,764¹	653,976¹	658,404	319,488
1956					
Under 20 years.....	27,908	214,352	33,448	22,028	5,880
20 - 24 ".....	136,020	1,128,788	195,772	116,860	19,160
25 - 29 ".....	132,316	1,185,888	212,488	115,844	16,472
30 - 34 ".....	107,388	955,348	188,592	92,876	14,512
35 - 39 ".....	85,692	768,316	154,808	73,376	12,316
40 - 44 ".....	76,272	717,968	146,560	63,964	12,308
45 - 49 ".....	65,488	649,588	131,328	54,196	11,292
50 - 54 ".....	53,072	568,220	106,524	42,708	10,364
55 - 59 ".....	39,488	474,324	80,388	30,572	8,916
60 - 64 ".....	37,096	649,064	73,272	25,516	11,580
65 - 69 ".....	17,212	357,260	36,540	10,444	6,768
70 and over.....	14,896	363,792	35,820	7,624	7,272
Unspecified.....	8,440	72,632	14,232	7,384	1,056
Totals, 1956	801,288	8,105,540	1,409,772	663,392	137,896

¹ October to December only for 1955; for January to September duration was calculated on a 'day' basis. Total number of days for that period was 52,408,092.

27.—Regular Benefit Periods Terminated during 1955 and 1956 and Duration of Benefit Paid classified by Occupation

NOTE.—Based on a 25-p.c. sample.

Occupation	1955			1956		
	Benefit Periods Terminated	Duration of Benefit ¹		Benefit Periods Terminated	Duration of Benefit	
		Complete Weeks	Partial Weeks		Complete Weeks	Partial Weeks
	No.	No.	No.	No.	No.	No.
Managerial.....	7,592	23,992	4,232	7,048	95,340	9,788
Professional.....	7,068	16,188	3,408	5,960	61,904	7,156
Clerical.....	74,032	206,372	36,840	64,452	746,604	92,552
Transportation.....	89,912	214,940	61,276	77,900	803,456	152,812
Communication.....	6,460	17,404	3,292	5,896	78,840	9,072
Commercial.....	50,376	112,160	28,652	45,636	532,104	90,368
Financial.....	624	1,848	436	572	4,656	668
Service.....	81,020	241,000	48,716	67,988	596,604	113,900
Personal.....	36,972	108,624	22,264	32,348	413,080	54,864
Domestic.....	28,892	78,024	16,084	23,252	290,368	34,860
Protective.....	13,428	49,428	9,392	10,780	172,928	21,376
Other.....	1,728	4,924	976	1,608	20,228	2,800
Agricultural.....	4,956	16,672	3,724	3,636	43,640	4,816
Fishing, trapping and logging.....	62,016	70,208	24,204	46,344	458,124	77,988
Fishing and trapping.....	1,052	2,316	876	676	7,244	972
Logging.....	60,964	67,892	23,328	45,668	450,880	77,016
Mining.....	20,204	41,196	16,880	19,716	131,720	52,908
Manufacturing and mechanical.....	226,164	468,252	191,644	173,672	1,448,212	306,700
Electric light and power.....	15,056	43,980	9,588	12,052	132,388	20,640
Construction.....	115,672	252,760	77,748	99,892	931,140	176,860
Labourers.....	202,940	457,212	134,600	157,360	1,606,556	270,292
Unspecified.....	13,800	28,580	8,736	13,164	134,252	23,252
Totals, All Occupations.....	977,892	2,212,764¹	653,976¹	801,288	8,105,540	1,499,772

¹ October to December only; for January to September duration was calculated on a 'day' basis. Total number of days for that period was 52,408,092.

28.—Persons Establishing Seasonal Benefit Periods, Duration of Benefit and Amount Paid, by Province 1955 and 1956

NOTE.—Based on a 25-p.c. sample.

Province	1955 ¹			1956 ²			
	Persons Establishing Benefit Periods	Benefit Days Paid	Amount of Benefit	Persons Establishing Benefit Periods	Benefit Weeks Paid		Amount of Benefit
					Complete	Partial	
	No.	No.	\$	No.	No.	No.	\$
Newfoundland.....	9,384	325,166	1,103,964	12,108	107,616	3,696	2,294,160
Prince Edward Island.....	2,198	84,136	231,280	2,384	22,864	1,056	392,920
New Scotia.....	11,436	475,088	1,428,724	12,976	105,232	6,880	1,992,640
New Brunswick.....	14,854	580,374	1,095,243	17,140	140,536	7,264	2,694,720
Quebec.....	83,468	3,218,690	9,394,301	89,288	692,536	31,504	13,424,040
Ontario.....	70,180	2,749,692	8,164,423	65,512	476,864	25,748	8,904,800
Manitoba.....	13,244	537,412	1,597,416	12,944	109,212	5,872	2,027,160
Saskatchewan.....	9,502	375,352	1,138,634	9,576	84,708	3,452	1,665,200
Alberta.....	12,210	444,964	1,378,049	11,728	85,144	5,152	1,688,280
British Columbia.....	23,524	902,420	2,757,598	22,040	156,492	9,980	2,995,000
Totals.....	250,090	9,703,294	23,890,641	255,696	1,982,204	100,694	38,079,920

¹ Jan. 1 to Apr. 15.

² Jan. 1 to Apr. 21.

Employment Service.—The Unemployment Insurance Commission operates a free employment service under authority of the Unemployment Insurance Act, 1940. The public employment offices, which had functioned under a joint federal-provincial arrangement for more than two decades, were taken over by the Commission on Aug. 1, 1941, and additional offices were established in all provinces except Quebec. The Commission established its own offices in Quebec and the Provincial Government thereupon reduced the number of its offices.

29.—Applications for Employment, Positions Offered and Placements Effected by Employment Offices 1947-56 and by Province 1955 and 1956

NOTE.—Figures by provinces from 1920-54 are given in the corresponding table of previous Year Books beginning with the 1926 edition. Totals for 1920-37 are given in the 1938 edition, p. 766; for 1938 in the 1939 edition, p. 802; and for 1939-46 in the 1951 edition, p. 686.

Year and Province	Applications Registered		Vacancies Notified		Placements Effected	
	Males	Females	Males	Females	Males	Females
	No.	No.	No.	No.	No.	No.
1947.....	1,189,646	439,577	1,060,134	476,643	549,376	220,473
1948.....	1,197,295	459,332	794,207	391,385	497,916	214,424
1949.....	1,295,690	494,956	652,853	373,837	464,363	219,816
1950.....	1,500,763	575,813	800,611	363,711	559,882	230,920
1951.....	1,541,208	623,467	943,773	387,795	655,933	262,305
1952.....	1,781,689	664,485	855,152	444,926	677,777	302,730
1953.....	1,990,918	754,358	822,852	466,310	661,167	332,239
1954.....	2,129,110	840,877	665,029	423,291	545,452	316,136
1955.....	2,161,081	829,741	797,917	435,056	642,726	310,850
1956.....	2,182,904	809,277	986,653	438,967	748,464	298,515
Newfoundland.....1955	47,339	3,094	4,528	820	3,405	437
.....1956	50,084	3,621	6,724	1,081	4,935	597
Prince Edward Island.....1955	10,449	4,763	4,439	2,878	3,468	2,244
.....1956	10,525	4,773	5,196	2,861	3,751	2,369
Nova Scotia.....1955	79,052	23,171	21,790	10,844	18,069	7,895
.....1956	80,633	22,615	24,268	11,037	19,941	7,676
New Brunswick.....1955	92,941	22,356	31,036	8,896	25,628	6,473
.....1956	90,508	21,399	30,872	9,084	23,171	6,082
Quebec.....1955	578,483	194,868	210,884	101,831	156,557	65,813
.....1956	581,178	188,673	259,362	108,787	183,494	69,289
Ontario.....1955	752,244	314,865	292,053	158,025	245,967	114,230
.....1956	776,589	312,875	369,491	159,326	292,032	110,154
Manitoba.....1955	103,695	54,234	38,643	25,619	31,029	18,249
.....1956	102,616	51,171	50,594	25,184	38,970	17,436
Saskatchewan.....1955	71,764	30,080	29,850	14,417	23,735	10,116
.....1956	70,599	30,652	39,513	17,095	28,684	11,134
Alberta.....1955	144,715	54,971	66,039	36,168	52,173	23,445
.....1956	137,369	55,812	81,300	40,433	59,798	25,484
British Columbia.....1955	280,399	127,339	98,655	75,558	82,695	61,948
.....1956	282,803	117,686	116,333	64,079	93,688	48,294

Section 6.—Vocational Training*

The federal Department of Labour, under the authorization of the Vocational Training Co-ordination Act 1942, co-operates with the provinces in promoting and developing vocational training in Canada by sharing with the provincial governments the costs of establishing and operating various types of schools and training programs designed to fit trainees for employment.

* More detailed information is given in the annual report, *Canadian Vocational Training Branch*, published as a supplement to the annual report of the Department of Labour.

The federal-provincial program under which all classes and training projects are operated is known as 'Canadian Vocational Training'. In conducting this program, the Minister of Labour receives advice and co-operation from the Vocational Training Advisory Council which consists of representatives of provincial governments, employers, organized labour and other bodies concerned with vocational training in Canada. Problems regarding apprenticeship, including federal participation therein, are referred to the Apprenticeship Training Advisory Committee which reports to the Minister through the Council.

The established procedure is to have all training programs operated by or under the supervision of the appropriate provincial authority and to reimburse the provinces for provincial government expenditures in connection with such projects. Where classes or training programs are operated for federal government departments, the Armed Forces, or other federal agencies, the provinces are reimbursed for the full costs; otherwise they are reimbursed for one-half of such expenditures subject to the limitation of funds voted for such purpose by Parliament.

There are four federal-provincial agreements governing the nature and extent of the sharable expenditures for different types of training: the Vocational and Technical Training Agreement No. 2, the Apprenticeship Agreement, the Vocational Training Agreement, and the Vocational Correspondence Courses Agreement.

Assistance to Vocational and Technical Training.—Ten-year agreements for vocational and technical school assistance were signed by nine provinces and the Yukon and Northwest Territories in 1957. The agreements provide for a total of \$15,000,000 to be expended by the Federal Government over a five-year period for operating expenses of vocational schools and technical institutes of lower than college grade, and \$25,000,000 for capital assistance in building and equipping such schools, with preference given to trade schools and technical institutes.

The capital assistance is divided among the provinces and territories on the basis of number of persons in the 15-19 age group. Under the annual allotment an initial amount of \$30,000 is made available to each province and \$20,000 to each territory, the balance being distributed on the basis of the 15-19 age group. The total annual allotment for the first two years of the agreement is \$2,500,000, for the third year \$3,000,000 and for the fourth and fifth years \$3,500,000.

The Vocational Schools' Assistance Agreement, which had been in effect from 1945, expired on Mar. 31, 1957.

Apprenticeship Training.—Apprenticeship agreements covering a ten-year period commencing Apr. 1, 1944, were signed by all provinces except Quebec and Prince Edward Island. Newfoundland signed an agreement in 1950 for the remainder of the 1944-54 period. These agreements have been renewed for a further ten-year period expiring on Mar. 31, 1964. They provide for sharing, on a 50-50 basis, in provincial government expenditures on the training of indentured apprentices who are registered with the provincial Departments of Labour under the provisions of the apprenticeship Act of each province. Training is provided on the job and in specially organized classes which may be conducted on a full-time basis during the day or as part-time day or evening classes. As of Mar. 31, 1957, a total of 16,663 apprentices was registered. Federal Government expenditures for this purpose for the year ended Mar. 31, 1957, were as follows:—

<u>Province</u>	<u>Payment</u>	<u>Province</u>	<u>Payment</u>
	\$		\$
Newfoundland.....	38,242	Alberta.....	281,313
Nova Scotia.....	71,306	British Columbia.....	110,769
New Brunswick.....	69,460	Northwest Territories.....	2,176
Ontario.....	301,004		
Manitoba.....	62,330	TOTAL.....	1,033,979
Saskatchewan.....	97,378		

Special Vocational Training Projects.—Agreements that provide for sharing with the provinces the costs of various types of training projects, other than those regularly conducted in schools assisted under the provisions of the Vocational and Technical Training Agreement No. 2, have been in operation since 1939. These agreements were consolidated in 1948 and expired in 1954; they have been renewed for a further five-year period, except that the provision for sharing the costs of financial assistance to university students and nurses-in-training is subject to renewal on a year-to-year basis. The conditions governing financial assistance to the various types of projects are set forth in schedules attached to and forming part of each agreement. These schedules cover special training classes for members of the Armed Forces, the costs of which are borne entirely by the Federal Government; training programs on an individual or class basis for veterans of the Armed Forces for which the provinces are reimbursed 100 p.c.; and special training programs for employees of federal government departments, the full cost of which is also borne by the federal treasury. In addition the costs of the following types of classes are shared equally by the federal and provincial governments: training for unemployed persons who require such training to fit them for available employment; rehabilitation training for disabled persons; short-term classes for young people in rural communities; and training programs for supervisors in industrial establishments. Total expenditure from the federal treasury under these vocational training agreements for the year ended Mar. 31, 1957, was \$948,668.

Correspondence Courses.—Under the provisions of the Vocational Correspondence Courses Agreement, the Federal Government shares equally with the provincial governments in the costs of printing and preparing correspondence courses. These courses, of which there are approximately 100, must be approved by a committee consisting of the provincial officials in charge of correspondence instruction. They are made available to students anywhere in Canada on the same terms as for students in the province where the course has been prepared. The sum of \$125,000 was appropriated in 1950 to provide for such expenditures during a five-year period. Payments are made to the provinces only on completion of approved courses, and the term of the agreements has been extended to Mar. 31, 1958, to take care of incomplete courses and needed revisions.

Section 7.—Industrial Accidents and Workmen's Compensation

Subsection 1.—Fatal Industrial Accidents

Statistics of fatal industrial accidents have been compiled by the federal Department of Labour since 1903. The data are now obtained from provincial Workmen's Compensation Boards, the Board of Transport Commissioners and other government authorities, departmental correspondents and from press reports.

30.—Fatal Industrial Accidents 1953-56

Industry	Numbers				Percentages of Total			
	1953 ^r	1954 ^r	1955	1956 ^p	1953 ^r	1954 ^r	1955	1956 ^p
Agriculture.....	114	100	88	104	8.6	7.7	6.6	7.3
Logging.....	167	168	183	193	12.6	13.0	13.8	13.6
Fishing and trapping.....	33	31	32	18	2.5	2.4	2.4	1.3
Mining, non-ferrous smelting and quarrying.....	187	204	179	246	14.2	15.7	13.5	17.4
Manufacturing.....	212	207	219	189	18.3	16.0	16.5	13.3
Construction.....	223	238	243	301	16.9	18.4	18.3	21.3
Electric light and power.....	35	26	42	28	2.6	2.0	3.2	2.0
Transportation and public utilities.....	178	193	211	221	13.5	14.9	15.9	15.6
Trade.....	58	53	50	55	4.4	4.1	3.8	3.9
Finance.....	4	3	5	1	0.3	0.2	0.4	0.1
Service.....	80	73	74	60	6.1	5.6	5.6	4.2
Totals.....	1,321	1,296	1,326	1,416	100.0	100.0	100.0	100.0

Causes of Industrial Fatalities.—During 1956, of the 1,416 fatal accidents to industrial workers, 406 were caused by moving objects; 73 by falling trees and branches; 34 by falling or flying objects in mines and quarries; 37 by automobiles and trucks; and 56 by landslides and cave-ins. Collisions, derailments, wrecks, etc., were responsible for 344 industrial fatalities. Automobiles and trucks were involved in 157 of these accidents; watercraft in 51; tractors in 61; aircraft in 35; and railways in 31. Falls and slips were responsible for 250 industrial deaths, of which 247 were falls to different levels including 76 deaths caused by falls into rivers, lakes, seas or harbours; 32 by falls from scaffolds and stagings; 25 by falls into shafts, pits, excavations, etc.; 28 by falls from buildings, roofs and towers; and 12 by falls from ladders and stairs. There were 97 deaths caused by exposure to dust and poisonous gases, and 82 deaths caused by workers being caught in, on or between parts of machinery or other agencies. Conflagrations, temperature extremes and explosions caused 111 industrial fatalities; 57 were caused by over-exertion or industrial diseases, and 58 by contact with electric current.

Subsection 2.—Workmen's Compensation*

In all provinces legislation is in force providing for compensation for injury to a workman by accident arising out of and in the course of employment, or by a specified industrial disease, except where the workman is disabled for fewer than a stated number of days. The Acts of all provinces provide for a compulsory system of collective liability on the part of employers. To ensure payment of compensation each Act provides for an accident fund, administered by the province, to which employers are required to contribute at a rate determined by the Workmen's Compensation Board in accordance with the hazards of the industry. A workman to whom these provisions apply has no right of action against his employer for injury from an accident during employment. In Ontario and Quebec public authorities, railway and shipping companies, and telephone and telegraph companies are individually liable for compensation as determined by the Board and pay a proportion of the expenses of administration. A federal Act provides for compensation for accidents to Federal Government employees according to the conditions laid down by the Act of the province in which the employee is usually employed. Seamen who are not under a provincial Workmen's Compensation Act are entitled to compensation under the Merchant Seamen Compensation Act.

In all provinces, free medical aid is given to workmen during disability. Compensation is payable in all provinces for anthrax and for poisoning from arsenic, lead, mercury and phosphorus and silicosis is compensated under certain conditions. Other diseases compensated vary according to the industries of the provinces.

Scope of the Workmen's Compensation Acts.—The Acts vary in scope but in general they cover construction, mining, manufacturing, lumbering, transportation and communications and the operation of public utilities. Undertakings in which not more than a stated number of workmen are usually employed may be excluded, except in Alberta and British Columbia.

Benefits.—Under each Act, except those of Saskatchewan and Alberta, if a workman is disabled from earning full wages for fewer than a stated number of days, usually called the 'waiting period', he cannot recover compensation for the period of his disability or, in Manitoba and British Columbia, for the first three days of his disability. Where the disability continues beyond the required number of days, compensation is payable from the date of the accident. Medical aid is always paid from the date of the accident. In Saskatchewan and Alberta the waiting period is one day, that is, compensation is not payable when the workman is off work only for the day on which the accident occurs. When he is disabled for a longer time, compensation begins from the day following the accident.

* More detailed information is given in the Department of Labour publication, *Workmen's Compensation in Canada, A Comparison of Provincial Laws*.

Burial expenses are paid to the amount of \$250 in Saskatchewan and British Columbia, and of \$200 in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba and Alberta. In seven provinces an additional sum is allowed for transporting the workman's body.

A widow or invalid widower or a foster mother, as long as the children are under the age limit, receives a monthly payment of \$75 in Ontario, Saskatchewan and British Columbia; \$60 in Alberta and Newfoundland; \$55 in Quebec; and \$50 in Prince Edward Island, Nova Scotia, New Brunswick and Manitoba. In addition, a lump sum of \$250 is paid in Saskatchewan; \$200 in Ontario, Quebec and Manitoba; \$150 in Alberta; and \$100 in all other provinces.

For each child in the care of a parent or foster mother receiving compensation, a monthly payment of \$35 is made in Saskatchewan; \$30 in Alberta; \$25 in Ontario and British Columbia; \$20 in Nova Scotia, Quebec, Manitoba, Newfoundland and Prince Edward Island; and \$12 in New Brunswick; with a maximum of \$130 to any one family in Prince Edward Island and \$150 in Nova Scotia.

For each orphan child a monthly payment of \$45 is made in Saskatchewan; \$35 in Ontario; \$30 in Nova Scotia, Quebec, Manitoba, British Columbia, Prince Edward Island, Newfoundland and Alberta (in Alberta a further amount, not exceeding \$10 a month, may be given at the discretion of the Board); and \$25 in New Brunswick; with a maximum of \$120 a month to any one family in Prince Edward Island and of \$150 in Nova Scotia.

Invalids excepted, payments to children are not continued beyond the age of 16 years in seven of the provinces but the Board has discretion to pay compensation to the age of 18 years if it is considered desirable to continue a child's education. In Quebec, the age limit is 18 years and in New Brunswick and British Columbia compensation is paid to the age of 18 years if a child is regularly attending school. In Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan and British Columbia payments to invalid children are continued until recovery, but the other provinces make payments only for the length of time the Board considers that the workman would have contributed to their support.

Where the only dependants are persons other than consort or children, all the Acts provide that compensation is to be a reasonable sum proportionate to the pecuniary loss but the total monthly amount to be paid to all such dependants is limited to \$100 in Ontario; \$85 in Alberta; \$75 in British Columbia; and \$60 in Prince Edward Island, Nova Scotia and Manitoba. In British Columbia, if a workman leaves dependent parents as well as a widow or orphans, the maximum payable to a parent or parents is \$75 a month. Compensation to dependants, other than consort or children, is continued only for such time as the Board considers that the workman would have contributed to their support.

Except in Alberta and British Columbia, each Act places a maximum on the total amount of benefits payable to dependants if the workman dies. A maximum is placed on the amounts that may be paid to the widow and children in Prince Edward Island and Nova Scotia. In Prince Edward Island the maximum is \$130 to a widow and children and \$120 to orphan children. The Nova Scotia maximums are \$150 in each case. In New Brunswick the maximum to all dependants is 70 p.c. of the workman's earnings and in Newfoundland, Quebec and Manitoba, 75 p.c. In Ontario and Saskatchewan the average earnings are the maximum amount payable.

Irrespective of the workman's earnings, however, compensation may not fall below certain minimum monthly amounts. The minimum payable to a consort and one child in Quebec is \$75 a month or \$95 if there is more than one child; in Manitoba the minimum is \$70 if there is a consort and one child and \$90 if there is more than one child; in Saskatchewan the minimum is \$100 a month to a consort and child and \$115 to a consort and two children plus \$10 a month for each additional child. In Newfoundland, a widow must receive at least \$60 a month with a further payment of \$20 for each child under 16 years of age unless the total exceeds \$130. In Ontario, the minimum payable to a widow is \$75 a month with a further payment of \$25 for each child up to but not exceeding \$150 a month.

Compensation for total disablement in Nova Scotia and New Brunswick is a periodical payment for the duration of the disability equal to 70 p.c. of average earnings; in the other provinces the rate is 75 p.c. Except in New Brunswick, the Acts fix minimum sums to be paid for a permanent total disability. The minimum is \$15 a week in Prince Edward Island, Quebec and Manitoba, and \$25 in Saskatchewan, Alberta and British Columbia. In Newfoundland the minimum is \$65 a month, and in Nova Scotia and Ontario \$100 a month. If average earnings are less than the minimum amount allowed, the amount of the earnings is paid in all provinces except Nova Scotia and Saskatchewan. For partial disablement, compensation is either a percentage of the difference in earnings before and after the accident, the percentage rate being the same as in total disablement, or the amount is determined by the Board according to the diminution of earning capacity. In all provinces, if the impairment of earning capacity is 10 p.c. or less (5 p.c. or less in Alberta), a lump sum may be given.

The average earnings on which compensation is based are limited to \$5,000 a year in Ontario and Saskatchewan; \$4,000 in New Brunswick, Quebec, Alberta and British Columbia; \$3,500 in Manitoba; \$3,000 in Newfoundland and Nova Scotia; and \$2,700 in Prince Edward Island. If the workmen's earnings at the time of an accident are not considered a proper basis for compensation the Board may use as a basis the average earnings of another person in the same grade of work. Compensation paid workmen under 21 years of age may be raised later if it appears that their earning power would have increased had the injury not occurred.

Table 34 gives the number of industrial accidents reported by each of the provinces and the amount of compensation paid by the Workmen's Compensation Boards in the years 1955 and 1956.

31.—Industrial Accidents Reported and Compensation Paid by Workmen's Compensation Boards 1955 and 1956

Year and Province	Industrial Accidents Reported					Compensation Paid ²
	Medical Aid Only ¹	Temporary Disability	Permanent Disability	Fatal	Total	
	No.	No.	No.	No.	No.	\$
1955						
Newfoundland.....	5,608	4,193	95	17	9,913	1,044,087
Prince Edward Island.....	771	635	12	2	1,420	156,542
Nova Scotia.....	9,878	7,437	543	41	17,902	3,505,273
New Brunswick.....	6,560	8,245	194	33	15,032	1,663,347
Quebec.....	..	..	..	227	95,257	14,822,043 ³
Ontario.....	147,330	59,284	1,922	278	208,814	32,446,936 ³
Manitoba.....	11,661	5,521	121	29	17,332	2,254,022
Saskatchewan.....	9,082	8,011	137	52	17,282	3,270,901 ⁴
Alberta.....	24,858	17,760	698	116	43,432	6,458,144
British Columbia.....	43,573	25,036	1,223	180	70,012	17,727,188
Totals, 1955.....	...	...	...	978	496,396	83,348,483
1956⁵						
Newfoundland.....	5,410	4,476	40	11	9,937	1,157,560
Prince Edward Island.....	691	549	9	4	1,253	114,090
Nova Scotia.....	10,043	7,903	74	83	18,103	3,607,209
New Brunswick.....	..	..	..	26	17,864	1,814,378
Quebec.....	..	..	..	212	106,004	17,078,869 ³
Ontario.....	164,416	65,313	2,250	312	232,291	36,326,114 ³
Manitoba.....	12,341	5,843	128	30	18,342	2,459,434
Saskatchewan.....	11,121	10,685	250	62	22,118	3,644,021 ⁴
Alberta.....	28,833	19,866	769	126	49,594	7,588,633
British Columbia.....	49,635	28,210	1,191	229	79,265	19,024,131
Totals, 1956.....	...	...	...	1,095	554,771	92,814,442

¹ Accidents requiring medical treatment but not causing disability for a sufficient period to qualify for compensation; the period varies in the several provinces. ² Includes, except where noted otherwise, payments to compensate for lost earnings, medical aid payments, cost of rehabilitation and hospitalization (not including capital expenditures), pensions paid (not total pensions awarded) for temporary and permanent disabilities.

³ Does not include payments by employers who make direct compensation to their employees; such employers come under Schedule II of the Ontario and Quebec Workmen's Compensation Acts. ⁴ Not including hospitalization costs.

Section 8.—Workers Affected by Collective Agreements

Statistics on the number of workers affected by collective agreements in Canada are compiled by the Department of Labour. Table 32 gives figures for the principal industrial groups. The second column of the table shows the number of workers affected by agreements extended under the Quebec Collective Agreement Act (*see* Sect. 1, ss. 2).

Any duplication of the numbers of workers covered by agreements under this Act and by other agreements is eliminated in the third column. A more detailed table and studies of agreements in certain industries are available from the Department of Labour, Ottawa.

32.—Workers Affected by Collective Agreements by Industry 1955

Industrial Group	Agreements (other than those in Column 2)	Agreements Extended under Collective Agreement Act, Quebec	Total ¹
	No.	No.	No.
Agriculture.....	65	—	65
Forestry.....	55,822	—	55,822
Fishing.....	8,635	—	8,635
Mining (including militing), Quarrying and Oil Wells.....	61,754	60	61,814
Metal mining.....	37,121	—	37,121
Fuels.....	15,281	—	15,281
Non-metal mining.....	7,631	60	7,691
Quarrying, clay and sand pits.....	1,721	—	1,721
Manufacturing.....	661,178	88,993	709,190
Foods and beverages.....	67,791	169	67,960
Tobacco products.....	5,956	—	5,956
Rubber products.....	13,818	—	13,818
Leather products.....	11,855	14,006	19,899
Textile products (except clothing).....	37,020	1,172	37,771
Clothing (textile and fur).....	51,464	39,454	65,016
Wood products.....	46,985	6,125	51,100
Paper products.....	67,524	3,107	68,326
Printing, publishing and allied trades.....	21,699	6,517	24,726
Iron and steel products.....	103,977	3,194	106,491
Transportation equipment.....	97,771	11,891	107,472
Non-ferrous metal products.....	37,247	489	37,736
Electrical apparatus and supplies.....	46,952	—	46,952
Non-metallic mineral products.....	18,847	1,936	20,567
Products of petroleum and coal.....	9,312	—	9,312
Chemical products.....	19,828	923	19,956
Miscellaneous manufacturing industries.....	6,132	—	6,132
Construction.....	105,122	98,554	202,791
Transportation, Storage and Communication.....	305,165	8,245	307,655
Transportation.....	250,531	8,245	252,021
Storage.....	6,133	—	6,133
Communication.....	49,501	—	49,501
Public Utility Operations.....	30,276	—	30,276
Trade.....	53,740	8,493	56,497
Finance, Insurance, and Real Estate.....	1,444	—	1,444
Service.....	118,120	11,540	127,603
Totals.....	1,405,321	215,885	1,561,792

¹ Duplications in columns 1 and 2 eliminated.

Section 9.—Organized Labour in Canada

HISTORY OF THE LABOUR MOVEMENT IN CANADA*

Canadian trade union history goes back a surprisingly long way. Nova Scotia had an Act against unions, and therefore presumably some unions, as early as 1816. Printers were organized in Quebec in 1827, and in Montreal and Hamilton in 1833. Shoemakers were organized in Montreal in 1827, carpenters in 1834, and stonecutters in 1844. The York printers were organized in 1832, and the Toronto Typographical Union has a continuous history from 1844. But brief life was the portion of most of these, and it was not until the middle of the nineteenth century that the first small foundations of the present Canadian union structure were laid.

Almost from the beginning, Canadian unionism was predominantly "international"; that is, most of its members belonged to unions with their headquarters and the bulk of their membership in another country. The first "outside" unions were British. The Amalgamated Society of Engineers (ASE) established its first local in Canada in 1850, followed by three more in 1851. The Amalgamated Society of Carpenters and Joiners (ASCJ) in 1860 became the first permanent union in the building trades. The ASE was absorbed into the International Association of Machinists in 1920, and the ASCJ into the United Brotherhood of Carpenters and Joiners in 1914, though some branches seceded in 1922 and resumed their status as locals of the British organization until 1925, when the latter formally withdrew. The much more important American unions began to come in 1861, with the Iron Moulders, followed by the Locomotive Engineers in 1864, the National Typographical Society (now the International Typographical Union) and the Cigar Makers in 1865, the Knights of St. Crispin (shoemakers) in 1867, and the Railway Conductors in 1868. The Coopers arrived in the late 1860's and the Locomotive Firemen in the early 1870's.

At the same time, however, a variety of purely Canadian local unions were springing up: shipwrights [at Victoria and Quebec (1862), Halifax (1863), Saint John and Quebec (1865)], bakers, tailors, bricklayers, stonecutters, wharf porters, longshoremen, and bookbinders.

Until 1871, the various unions had little to do with each other but in that year five craft unions formed the Toronto Trades Assembly. Two years later Ottawa had a flourishing Trades Council which, in 1873 and 1875 succeeded in electing a Labour member, D. J. O'Donoghue, to the Provincial Legislature. Hamilton had a Trades Council about the same time. All of these disappeared in the depression of the 1870's, but not without having laid the foundations of a national organization and won a resounding legislative victory.

In 1873, the Toronto Trades Assembly called a convention of unions in that city, attended by delegates from 31 locals of 14 unions, all in Ontario, though letters of approval came from typographical unions in Quebec and Montreal. This convention decided to set up a national central organization, the Canadian Labor Union, which met again in 1874, 1875, 1876 and 1877. But the depression was as fatal to the national organization as to the local Councils, and from 1878 to 1882 there was not even the shadow of a national trade union centre.

The legislative victory resulted from the Toronto Printers' strike of 1872, part of the nine-hours movement. Most of the master-printers, headed by George Brown of the *Globe*, were fiercely anti-union. They had all 24 members of the committee of the Typographical Union arrested on a charge of seditious conspiracy. Labour had confidently assumed that unions were legal but now discovered they were not. They had benefited from none of the British Acts freeing unions of their Common Law disabilities as conspiracies and combinations in restraint of trade. Legally, Canadian unions were still in the eighteenth century, the age before the Industrial Revolution. They promptly set to work to get Canadian legislation to match the British. Sir John A. Macdonald, delighted

* Prepared by Dr. Eugene Forsey, Director of Research, Canadian Labour Congress, Ottawa.

at the opportunity to win Labour votes and "dish the Liberals" with two pieces of unimpeachably Gladstonian legislation, lost no time in passing through the Dominion Parliament a Trade Unions Act and a Criminal Law Amendment Act (1872) modelled on the British Acts of the previous year. This was the first big piece of successful political action by Canadian unions. The prosecution was dropped and the strike was won.

With the adoption of the national policy of tariff protection in 1879, and the construction of the Canadian Pacific Railway in 1881-85, Canadian industry began to revive and to grow, and the unions revived and grew with it. The building trades showed a marked expansion. The railway unions followed the railways westward. The Nova Scotia coal miners in 1879 formed the first coal miners' union in North America and one of the earliest industrial unions, taking in all workers in the industry regardless of craft. Indeed, this organization, the Provincial Workmen's Association, became for a time almost a provincial "one big union", covering not only coal miners and coal pier workmen but also iron workers, steel workers, railway men, tramway men, glass blowers, boot and shoe workers, retail clerks and about ninety other classifications. The Knights of Labor, also an industrial organization, entered Canada in 1881, and remained active here long after it was practically dead in the United States. Even apart from the Knights, the 1880's saw over a hundred new locals added to those that had survived the depression. Almost half of these were in Ontario, 21 were in the Maritimes, 19 in Quebec and 18 in the West.

The local Councils also revived. The Toronto Trades and Labor Council was organized in 1881, the London Council in 1883, the Montreal Council in 1885, and others in Ottawa, Brantford, Hamilton, Vancouver and Victoria at various dates during the 1880's. At first the Knights of Labor took part in these Councils and often a very active part, but towards the close of the decade they formed their own district assemblies in Montreal, Quebec, Toronto, St. Catharines and St. Thomas.

With the revival of the Councils came also a revival of the national central organization. In 1883, a committee of the Toronto Council issued a call to all labour organizations to send delegates to a national convention. This set up the Canadian Labor Congress, consisting of delegates from unions and Knights of Labor assemblies in Ontario only.

In September 1886, three months before the founding of the American Federation of Labor, the Toronto Trades and Labor Council summoned the Congress to meet again, and the "Canadian Trades and Labor Congress" (which in 1887 became the "Trades and Labor Congress of the Dominion of Canada", in 1888 the "Dominion Trades and Labor Congress", and in 1892 the "Trades and Labor Congress of Canada") was born. The first convention had 109 delegates, including one woman. All were from Ontario except one from Quebec City. Of the total, at least 84 were Knights of Labor. The Knights had a majority of the delegates also at the conventions of 1887-1889, 1891, 1893 and 1894, and a Knight held the Congress presidency from 1886 to 1892 inclusive. After 1894, however, the Knights rapidly declined and in 1902 they were expelled from the Congress.

Until 1896 the Congress was far from being a nation-wide organization. At the conventions of 1887 and 1888 all the delegates were from Ontario. From 1889 on, there was always a substantial delegation from Quebec; in 1890 British Columbia sent three delegates and in 1895 Manitoba sent one; in 1896 British Columbia sent two and Manitoba one. New Brunswick sent its first delegate in 1897, Prince Edward Island in 1900 and Nova Scotia in 1903, but in 1905 and 1906 there were no Maritime delegates at all. Provincial Executives for British Columbia and Manitoba were elected in 1895, for New Brunswick in 1896, and for Nova Scotia and Prince Edward Island in 1901. Saskatchewan and Alberta were represented from the beginning of their existence. Even in 1901, however, the last year before unity was shattered by the expulsion of the Knights of Labor and other organizations competing with American Federation of Labor unions, the Congress had only 8,381 members in all its unions, and its expenditure for the year was \$809.88. In 1902, for the first time, it engaged "a stenographer and a typewriter", which "necessitated the fitting up of a small office with two desks and a chair".

From 1896 on, Canadian trade unionism had to face the problem of reconciling continental union solidarity with Canadian autonomy. The Canadian Labor Union of 1873-1877 had not had to do so because no competing American central labour organization existed. The Trades and Labor Congress at first did not have to either, partly because it confined itself almost wholly to legislative activities (most of its unions were locals of organizations chartered by the American Federation of Labor or local assemblies of the Knights of Labor) and partly because it seems to have had, till 1896, no formal contact with the American Federation of Labor. In that year, the Congress complained to the Federation about the application of the American Alien Contract Labor Law to Canadian workers. The Federation replied by suggesting that the Congress send a fraternal delegate to its convention. This it did not do, but in 1898 the Federation was invited to send a fraternal delegate to the Congress convention, and in 1899 the two began an exchange that lasted as long as the Congress itself.

By expelling the Knights of Labor and purely Canadian 'dual' organizations in 1902, the Congress ranged itself definitely on the side of international unionism as against national. It did not, however, by any means accept the subordinate role that the Federation repeatedly tried to impose upon it. From 1897 on, it kept trying to get the international unions, or the Federation on their behalf, to turn over to the Congress the dues these unions paid to the Federation on their Canadian membership. It finally solved this problem by getting the international unions to affiliate their Canadian membership direct. The Federation persisted, right down to 1955, in chartering local unions in Canada. It also made repeated unsuccessful attempts to deny the Congress the right to charter local Trades and Labor Councils, and it took the Congress 35 years (1910 to 1945) to win complete victory. The Federation was successful in forcing the Congress to expel, in 1939, a whole group of unions belonging to the Congress of Industrial Organizations (CIO), but only after a struggle. A similar attempt, in 1946, to force expulsion of the Machinists met a firm and spirited refusal, and collapsed. After this, the Congress decided to assert itself by setting up a series of departments and a full-scale organizing staff and otherwise make plain the status it felt it did, and should, enjoy as a fully autonomous Canadian trade union centre.

None of these disputes, however, really disturbed the basic harmony between the Congress and the Federation. The Congress, made up overwhelmingly of international unions whose American members were affiliated to the Federation, never faltered in its allegiance to international unionism. It knew that in most industries international unions alone had the staff, experience and money to do the job that had to be done.

Meanwhile, however, the whole Canadian Labour Movement had been "by schisms rent asunder, by heresies distrest". Nationalism, industrial as against craft unionism, revolutionary ideas, and a mixture of nationalism and denominationalism all played their part. The unions expelled by the Trades and Labor Congress in 1902 promptly formed the National Trades and Labour Congress, which in 1908 became the Canadian Federation of Labour, and in 1910 took in the Provincial Workmen's Association of Nova Scotia. In 1919, just after the Winnipeg general strike, and partly as a result of it, many western unionists, attracted by revolutionary industrial unionism, broke away from the Trades and Labor Congress and formed the One Big Union. Between 1901 and 1921, small local Roman Catholic unions (some of them former Knights of Labor Assemblies) sprang up in Quebec under the fostering care of the hierarchy and clergy, and in 1921 formed the Canadian and Catholic Confederation of Labour. This organization, at first distrusted and denounced by the orthodox unions as a collection of thinly veiled "company unions", has in the past ten years shed the narrow denominationalism and nationalism of its early years and become one of the most militant labour organizations in the country. In 1927, the Canadian Federation of Labour and other national unions (notably the Canadian Brotherhood of Railway Employees, which had been founded in 1908, had entered the Trades and Labor Congress in 1917 and had been expelled from it in 1921) formed the All-Canadian Congress of Labour, dedicated to industrial and national unionism. By 1935, purely Canadian unions of one kind or another, including the Communist Workers'

Unity League, made up nearly half the total union membership in Canada. Within a few years, however, international unionism reasserted its predominance and for many years now about 70 p.c. of all Canadian unionists have belonged to international unions.

The great debate in the United States in the 1930's over the relative merits of industrial and craft unionism found only faint echoes in Canada. The Trades and Labor Congress had, and was prepared to have, both kinds, and it was most reluctant to expel the Canadian branches of CIO unions. But, faced with a virtual ultimatum from the American Federation of Labor that it must either expel the CIO unions or lose the AFL unions (whose Canadian membership was then far larger), it had really no choice, and in 1939 the CIO unions were accordingly cast forth. They at once formed a Canadian CIO Committee, which became the fourth Canadian central organization.

Through all these changes and chances, the four railway running trades (Conductors, Engineers, Firemen and Trainmen) remained unaffiliated with any central body, though every one of them had occasionally sent delegates to Trades and Labor Congress conventions, and in 1896 their joint Legislative Board had sent two delegates, of whom one was elected to the Congress Executive. The "big four", however, co-operated with each other and two Congress railway unions in a Dominion Joint Legislative Committee.

Late in 1939 came the first step towards unity (though, paradoxically, it created the first effective opposition to the Trades and Labor Congress). The All-Canadian Congress and the Canadian CIO Committee agreed to unite in the Canadian Congress of Labour, which was set up in 1940, with complete autonomy not only for itself but for the Canadian branches of CIO unions. Contrary to most expectations, this new Congress not only survived but grew and waxed strong, organizing mass production industries and pioneering in labour research, workers' education and labour public relations. For the next fifteen years, both Congresses passed resolutions almost every year in favour of unity and, from 1948 on, joint action on various matters became increasingly common. A Joint Consultative Committee of the two Congresses, the Canadian and Catholic Confederation and the Dominion Joint Legislative Committee was set up in 1951 but lasted only a year. As long as the two American central bodies were at loggerheads, their Canadian counterparts could make little progress towards reunion, because of the provisions of the Trades and Labor Congress Constitution which in effect forbade it to affiliate any union 'dual' to an American Federation of Labor union. Once the Americans agreed to discuss unity, this blockage disappeared. By the end of 1953 the two Canadian Congresses had appointed a joint Unity Committee, which first (1954) drew up a "No-raiding Agreement" (under which unions of the rival organizations agreed not to try to steal each others' members) and in 1955 a "Merger Agreement". After ratification by the two Congress conventions, the Merger Agreement came into force, and the founding convention of the united Canadian Labour Congress (CLC) took place in April 1956. In January 1957, the small and respectable remnant of the once powerful and revolutionary One Big Union joined the new Congress, the Locomotive Firemen followed in February, and the Trainmen in September. Meanwhile, both the Congress and the Canadian and Catholic Confederation of Labour had voted in favour of the latter's affiliation, and negotiations to this end are proceeding. The only unions of any size which remain altogether outside the unity movement are: the two big Communist-dominated unions expelled by the Canadian Congress of Labour; the United Mine Workers, which excluded itself by failing to pay its dues to that Congress; the Railway Conductors and the Locomotive Engineers; and the Operating Engineers, suspended by the new Congress. The total membership of the CLC (which, though made up mainly of international unions, is completely autonomous) is about 1,100,000, or over 80 p.c. of all trade unionists in Canada. It includes both craft and industrial unions, and both national and international unions.

No adequate history even of the central organizations, let alone the whole Movement, has yet been written. The material is voluminous and much of it is fascinating, not only in itself but for the light it sheds on Canadian social history in general, and on Canadian political history.

In some respects, Canadian trade unionism has changed almost out of all recognition since the first Canadian Labor Congress was founded almost three-quarters of a century ago. In others, it has changed very little. Some proposals which figured prominently in the early years have completely disappeared, sometimes because they have been carried into law, and sometimes because circumstances have made them obsolete or the whole climate of opinion has changed. Other early demands still figure in the present Canadian Labour Congress' Platform of Principles.

Of the early proposals that have completely disappeared, perhaps the most conspicuous is temperance. The Congress of 1883 unanimously passed a resolution of "heartily approval" for "any practical legislation tending to reduce the consumption of intoxicating liquor". In 1886, this became "any practical effort". The 1888 convention reaffirmed this. The 1886 convention actually received a deputation from the Dominion Alliance and empowered the Congress Executive to co-operate with the Alliance. The 1889 and 1890 conventions called upon all labour organizations to use their influence to promote and encourage temperance. The 1890 convention defeated a resolution for total prohibition by only 30 votes to 23. The convention of 1898 tabled a motion for a plebiscite on prohibition.

Quite as surprisingly, until 1902, the Trades and Labor Congress consistently demanded compulsory arbitration of labour disputes, and passed several resolutions in favour of incorporation of unions, both now anathema to Labour. Henry George's Single Tax on land values was also a hardy annual till 1899, and a diluted form of it survived in the Platform of Principles at least as late as 1912. The initiative and referendum made their appearance as early as 1892, and were still in the Platform in 1913. In 1887, the Congress voted to abolish Lieutenant-Governorships and make the Governor General elective. The latter proposal was passed again in 1890, by 39 to 14. The convention of 1893 wanted to abolish the office of High Commissioner in London. Those of 1892 and 1893 wanted to have a popular vote on "maintenance of our present colonial status; Imperial Federation; Canadian Independence; Political Union with the United States". The conventions of 1886-1888 wanted to have the Government issue all money; that of 1893 wanted it to "demonetize both gold and silver". The convention of 1891 wanted to have the products of anti-union employers deprived of tariff protection; that of 1893 "pronounced in favor of free trade"; that of 1902 condemned any increase in the tariff; those of 1903 and 1905 condemned Mr. Chamberlain's protective tariff proposals for Britain. The conventions of 1907, 1908 and 1909 bluntly declared "that as the capitalists of the world create war, they should do their own fighting", and that of 1909 empowered the Executive to "take the lead in calling a convention of all peace-loving citizens in Canada" to protest against increases in military expenditures. The 1911 convention endorsed a general strike against war. The conventions of 1888-1890 and 1900 condemned manual training in the schools. The conventions of 1886-1889 wanted governments to stop making grants to universities and colleges and to transfer the money to the schools. The convention of 1909 "offered up a sincere prayer that the light of common sense may yet reach the Canadian Manufacturers' Association".

The early demands for one day of rest in seven, "anti-truck" laws, provincial and Dominion bureaus of labour statistics, a Labour Department, a separate Minister of Labour, Employer's Liability Acts, manhood suffrage, and woman suffrage (1891), have all, in one form or another, been won. The nine-hour day has become the six-hour day, and the early and violently restrictive resolutions on immigration (first anti-Chinese, then anti-Japanese also, then anti-Indian as well, and always anti-pauper) have become "planned immigration for full employment", with a representative National Advisory Committee to keep the Act, regulations and policy under constant review and to suggest changes. Early demands which still figure in the Canadian Labour Congress Platform include the abolition of the Senate, public ownership of banks and public utilities, a living minimum wage, free compulsory education and support for co-operatives.

One subject which figured prominently in the early conventions of the Trades and Labor Congress and then seems to have dropped out of sight for a whole generation is co-operation with the farmers. In 1886, the Congress appointed a committee to meet with the Dominion Grange "to secure to some extent united action" on the Factory Act. In 1893 the Congress Executive met with representatives of the Grange, the Patrons of Industry (another farm organization) and the Social Problems Conference and adopted a common "platform". In the same year, the convention set up a standing committee with the Patrons "for the purpose of . . . devising a scheme for a union of the labor forces (rural and urban)", and provided for a vote by affiliated organizations on allowing the Grange, the Patrons and Single Tax Associations to affiliate. The returns from the affiliates were considered too scattered to provide any basis for policy. None the less, in 1894, the Constitution was amended to let the Patrons affiliate and to give them three delegates. Nothing came of this and the amendment was deleted next year. But, undaunted, in 1896 the Congress agreed on the desirability of unity with the Patrons and instructed the Executive to be represented at any meeting called by the Patrons. The 1907 convention had a delegate from the Canadian Branch of the American Society of Equity, another farmers' organization, and the Alberta Executive of the Congress wanted the convention to discuss a possible amalgamation of the "Trades and Labor party" with this Society. In 1910, the Executive recommended the appointment of a special committee to arrange co-operation with the farmers.

From 1941 on, both the Trades and Labor Congress and the new Canadian Congress of Labour devoted some attention to farmer-labour co-operation. The former, in 1941, "recognized that the well-being of labor is inseparably bound up with the prosperity of the farmer" and, fearing that "many farmers" would be "driven off the land" and "forced into competition with workers thereby driving down wages", expressed its "sympathy and support for the farmers to secure adequate debt protection and parity of farm prices". In the same year, the newer Congress declared in favour of co-operating with farm associations wherever possible and of Government aid in marketing farm produce in any friendly country. The next year, the Trades and Labor Congress called on the Government to help the farmers meet the shortages of machinery and services. In 1946 both Congresses supported the Alberta farmers' strike; the older declared for "close co-operation" between the Congress and its provincial bodies and national and provincial farm organizations; the younger suggested a conference of "Labour organizations and the official spokesman of the farmers" to work towards "complete unity . . . in our demands for social security". In 1947 the Canadian Congress of Labour declared its support for the farmers "in their attempt to get a fair price for their products", and in 1948 pledged itself to do all it could to promote "farmer-Labour-teacher" co-operation for "common aims and objectives", along the lines of the Saskatchewan Occupational Group Council. In 1949 the Trades and Labor Congress listened to a speech of greeting from the President of the Alberta Farmers' Union (which was already affiliated with the Calgary Trades and Labor Council). In 1951 the Canadian Congress of Labour called on the Government to work out with farm organizations "a just farm price-structure". The next year the older Congress had another speech of greetings, this time from the President of the Interprovincial Farm Union Council, and the other Congress declared for a "National Co-ordinating Committee of Farm and Labour organizations". From 1953 to 1955 both Congresses had farm speakers each year; so did the new Canadian Labour Congress at its founding convention in 1956. In February 1954 the two Congresses and the Interprovincial Farm Union Council set up the Farmer-Labour Economic Council, which still exists.

One other subject of great importance which in some form or other has had a place in almost every national meeting of labour organizations since 1883 is political action. The Canadian Labor Congress of 1883 unanimously resolved that "the working class of this Dominion will never be properly represented in Parliament or receive justice in the legislation of the country until they are represented by men of their own class and opinions". The 1886 convention reaffirmed this and the members pledged themselves to "use their utmost endeavours, wherever practicable, to bring out candidates for the local and Dominion elections" or, where this was not "deemed advisable", to support the candidate "who

pledges himself to vote for most planks of the platform of this Congress". The 1887 convention dropped this last part and adopted the remainder unanimously. The 1889 convention set up a committee to consider forming an "independent political party" and recommended the organizations to nominate candidates where practicable and elsewhere to support the party which was prepared to do most for Labour. In 1892, on motion of two French-Canadian delegates, the convention resolved to "take into consideration the advisability of forming a labor party". Perhaps as part of the consideration, the 1893 convention invited its member organizations to answer four questions: (1) Are you in favor of the present industrial system? (2) Are you in favor of the so-called co-operative system of productive (sic) distribution and exchange? (3) Are you in favor of the communistic system of government? (4) Have you any other system better than the above to suggest? (Strange to say, there were almost no replies.) In 1895, by a very narrow majority, the convention voted to admit "sections of the Socialist Labor Party" (this was repealed in 1896) and resolved that "labor organizations should now unite for independent political action".

Meanwhile, some organizations had actually been taking political action. During the 1880's, the Toronto and Hamilton Trades and Labor Councils had nominated candidates for both provincial and Dominion elections, and in 1886 the Knights of Labor ran three provincial candidates in Montreal. None were elected, and for practical purposes the Congress seems to have relied for some years on what was later to become the standard practice of meeting Dominion and provincial Ministers to present its views. By 1899, however, the Ontario Executive had decided that this was useless, and that "the only way to get from the Government what is our right is to elect men in sympathy with the labor cause". In the same year, the Winnipeg Trades and Labor Council and the Winnipeg Labor Party nominated A. W. Puttee for the House of Commons; and the Congress, presided over by Ralph Smith, M.L.A. for Nanaimo, B.C., decided to ask its member organizations whether they favoured an independent Labour party and would back its candidates. The vote was 1,424 in favour to 167 against, with only three organizations out of 44 voting "no". The 1900 convention decided this was enough to justify the Congress in "taking such steps as it deemed advisable to further the progress of such action". It also asked the Nanaimo miners to nominate President Smith for the House of Commons. They did; and both Smith and Puttee were elected, with another Labour candidate in Manitoba barely defeated. In 1903 a new Congress President, John Flett, was declaring that the meetings with the Dominion Government were useless, and that Canadian Labour should follow the British example and elect Labour men to Parliament. In 1904 he reiterated this, and for three years the annual interview was dropped and a parliamentary counsel was substituted to look after Congress interests full-time during the session. In 1903, 1904 and 1905 the conventions passed resolutions favouring independent Labour candidates wherever possible. In 1906, Alphonse Verville, President of the Congress, was elected to the House of Commons for Maisonneuve (Montreal), and declared he hoped for "at least a dozen" Labour members in the next Parliament. The convention responded by adopting what became the political action policy of the Trades and Labor Congress for the rest of its life. The Congress was to endorse sending Labour representatives to Parliament and the Legislatures; its provincial Executives were to summon provincial conventions of trade unionists and sympathizers to set up "the necessary associations"; and the Congress was then to step out of the picture, having "recommended" its own Platform of Principles as the platform for "this independent effort". The result of this was the foundation of a Canadian Labour Party in Ontario, Quebec, Manitoba, British Columbia and Nova Scotia. Though launched with considerable fanfare, especially in Ontario, for the most part this did not amount to much. Its only substantial success was in Ontario in 1919, when eleven Labour candidates were elected and two Labour Ministers entered the Farmer-Labour coalition. A few surviving sections entered the Co-operative Commonwealth Federation (CCF) in 1932 and 1933, along with the Independent Labour Party of Manitoba, which had elected two members to the House of Commons.

The Canadian Congress of Labour explicitly endorsed the CCF in 1943 and continued to do so throughout the remainder of its existence. It set up political action committees to implement this policy. Its efforts certainly helped the CCF to win power in Saskatchewan in 1944 and to retain it ever since; to maintain its position as the official Opposition in British Columbia for most of the past twenty years; to become briefly, though for the second time, the official Opposition in Ontario from 1948 to 1951; to win a few seats in the Nova Scotia Legislature; and to carry some industrial ridings in the House of Commons in the elections of 1945, 1949, 1953 and 1957. But on the whole the results were not what the Congress had hoped.

The Canadian Labour Congress at its first convention adopted a compromise policy on political action, leaving its provincial Federations, its local Councils and, of course, its autonomous affiliated unions free to follow whatever line they saw fit, and authorizing its Political Education Committee, under the guidance of the Executive Council, to initiate discussions with other free trade unions, the principal farm organizations, the co-operative movement, the CCF and "other parties pledged to support the legislative programme" of the Congress, in order "to explore and develop co-ordination of action in the legislative and political field". So far, no such discussions have taken place. The Ontario and British Columbia Federations and some important local Labour Councils have endorsed the CCF and several important unions that already were supporting the CCF have continued to do so.

This is, necessarily, hardly more than an impressionistic sketch of the history of the Canadian Labour Movement. Of the constant preoccupation of the Congresses with specific union problems, with questions of health and safety and general working conditions, and with a host of other matters, it has said nothing; nor has it so much as touched on the various unions which make up the central organizations and are, for many purposes, far more important—the affiliated unions do all the collective bargaining, have most of the money and are fully autonomous. It has barely mentioned the important Canadian and Catholic Confederation of Labour. But, again, the history even of the Congresses, let alone the particular unions, has yet to be written. Until it is, any summary must be preliminary, tentative and subject to drastic revision.

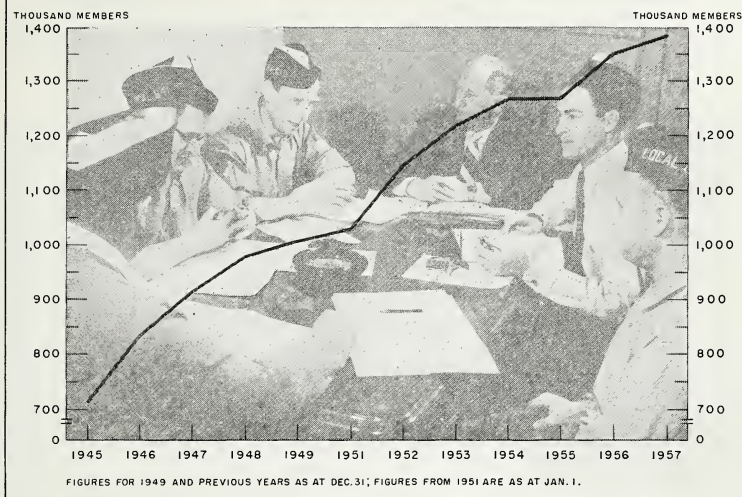
Labour Union Statistics.—Tables 33, 34 and 35 give historical and current figures on union membership in Canada.

33.—Membership of Labour Unions in Canada 1927-57

Year	Members	Year	Members	Year	Members
	No.		No.		No.
1927.....	290,282	1937.....	383,492	1947.....	912,124
1928.....	300,602	1938.....	381,645	1948.....	977,594
1929.....	319,476	1939.....	358,967	1949.....	1,005,639
1930.....	322,449	1940.....	362,223		
1931.....	310,544	1941.....	461,681	1951 ¹	1,028,521
				1952.....	1,146,121
1932.....	283,096	1942.....	578,380	1953.....	1,219,714
1933.....	285,720	1943.....	664,533	1954.....	1,267,911
1934.....	281,274	1944.....	724,188	1955.....	1,268,207
1935.....	290,648	1945.....	711,117	1956.....	1,351,652
1936.....	322,746	1946.....	831,697	1957.....	1,386,185

¹ Figures for 1949 and previous years are as at Dec. 31; figures from 1951 are as at Jan. 1.

MEMBERSHIP OF LABOUR UNIONS IN CANADA, 1945-57



34.—Union Membership and Local Branches in Canada as at Jan. 1, 1955-57

Organization	Jan. 1, 1955		Jan. 1, 1956	
	Branches	Membership	Branches	Membership
	No.	No.	No.	No.
Trades and Labor Congress of Canada ¹	3,598	600,791	3,765	640,271
American Federation of Labor only.....	54	9,290	24	1,050
Canadian Congress of Labour ¹	1,532	361,271	1,440	377,926
Congress of Industrial Organizations only.....	9	2,500	—	—
Canadian and Catholic Confederation of Labour.....	445	99,801	432	101,169
International Railway Brotherhoods (Independent).....	365	40,307	366	43,877
Unaffiliated international, national, regional and local unions..	670	154,247	735	187,359
Totals.....	6,673	1,268,207	6,762	1,351,652
	May 1, 1956 ²		Jan. 1, 1957	
	Branches	Members	Branches	Members
	No.	No.	No.	No.
Canadian Labour Congress.....	5,238	1,030,000	5,404	1,070,129
Canadian and Catholic Confederation of Labour.....	432	101,000	411	99,372
American Federation of Labor—Congress of Industrial Organizations.....	21	1,000	17	1,184
International Railway Brotherhoods (Independent) ³	366	44,000	257	33,594
Unaffiliated international, national, regional and local unions..	702	175,000	669	181,906
Totals.....	6,762	1,351,000	6,758	1,386,185

¹ Amalgamated as at May 1, 1956.² Estimated membership at the founding of the Canadian LabourCongress. ³ The Brotherhood of Locomotive Firemen and Enginemen affiliated with Canadian Labour Congress on Oct. 1, 1956.

**35.—Labour Unions Reporting 1,000 or more Members in Canada as
at Jan. 1, 1955-57**

Organization	Reported or Estimated Membership		
	1955	1956	1957
	No.	No.	No.
International Unions			
Asbestos Workers, International Association of Heat and Frost Insulators and (AFL-CIO/CLC).....	572	897	1,003
Automobile, Aircraft and Agricultural Implement Workers of America, International Union, United (AFL-CIO/CLC).....	60,000	65,000	60,000
Bakery and Confectionery Workers' International Union of America (AFL-CIO/CLC).....	4,833	5,000	5,668
Barbers, Hairdressers, Cosmetologists and Proprietors' International Union of America, The Journeymen (AFL-CIO/CLC).....	1,714	1,681	1,798
Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, International Brotherhood of (AFL-CIO/CLC).....	10,300	11,340	11,260
Bookbinders, International Brotherhood of (AFL-CIO/CLC).....	2,788	2,775	2,775
Brewery, Flour, Cereal, Soft Drink and Distillery Workers of America, International Union of United (AFL-CIO/CLC).....	4,500	4,500	5,000
Bricklayers, Masons and Plasterers' International Union of America (AFL-CIO/CLC).....	6,151	6,219	6,219
Bridge, Structural and Ornamental Iron Workers, International Association of (AFL-CIO/CLC).....	6,787	6,410	8,888
Broadcast Employees and Technicians, National Association of (AFL-CIO/CLC).....	965	1,157	1,202
Building Service Employees' International Union (AFL-CIO/CLC).....	5,038	6,200	7,029
Carpenters and Joiners of America, United Brotherhood of (AFL-CIO/CLC).....	54,709	56,694	68,020
Cement, Lime and Gypsum Workers International Union, United (AFL-CIO/CLC).....	2,705	2,962	3,388
Chemical Workers' Union, International (AFL-CIO/CLC).....	12,500	13,000	13,300
Clothing Workers of America, Amalgamated (AFL-CIO/CLC).....	15,000	15,000	15,000
Commercial Telegraphers' Union, The (AFL-CIO/CLC).....	4,502	5,341	5,341
Communications Workers of America (AFL-CIO/CLC).....	2,700	2,700	2,700
Distillery, Rectifying, Wine and Allied Workers' International Union of America (AFL-CIO/CLC).....	3,300	3,300	3,300
Electrical, Radio and Machine Workers, International Union of (AFL-CIO/CLC).....	15,090	16,009	16,000
Electrical, Radio and Machine Workers of America, United, (Ind.).....	22,500	23,000	24,500
Electrical Workers, International Brotherhood of (AFL-CIO/CLC).....	23,000	23,500	23,550
Engineers, American Federation of Technical (AFL-CIO/CLC).....	900	854	1,012
Engineers, International Union of Operating (AFL-CIO/CLC).....	9,055	10,200	13,000
Fire Fighters, International Association of (AFL-CIO/CLC).....	7,325	8,155	8,337
Firemen and Oilers, International Brotherhood of (AFL-CIO/CLC).....	2,200	2,200	2,100
Garment Workers of America, United (AFL-CIO/CLC).....	1,450	1,500	1,900
Garment Workers' Union, International Ladies, (AFL-CIO/CLC).....	13,736	14,191	14,191
Glass and Ceramic Workers of North America, United (AFL-CIO/CLC).....	1,820	4,420	4,650
Hatters, Cap and Millinery Workers International Union, United (AFL-CIO/CLC).....	3,500	3,500	3,500
Hod Carriers', Building and Common Labourers' Union of America, International (AFL-CIO/CLC).....	9,910	12,041	16,170
Hotel and Restaurant Employees and Bartenders International Union (AFL-CIO/CLC).....	11,768	12,281	13,107
Leather Goods, Plastics and Novelty Workers Union, International (AFL-CIO/CLC).....	300	400	1,050
Lithographers of America, Amalgamated (AFL-CIO/CLC).....	1,912	1,984	2,137
Locomotive Engineers, Brotherhood of (Ind.).....	8,149	8,293	8,293
Locomotive Firemen and Enginemen, Brotherhood of (AFL-CIO/CLC).....	8,856	10,045	10,603
Longshoremen's Association, Independent, International (CLC).....	6,500	6,000	6,000
Longshoremen's and Warehousemen's Union, International (CLC).....	1,500	2,000	2,000
Machinists, International Association of (AFL-CIO/CLC).....	49,097	47,208	49,423
Maintenance of Way Employees, Brotherhood of (AFL-CIO/CLC).....	20,000	20,000	20,000
Meat Cutters and Butcher Workmen of North America, Amalgamated (AFL-CIO/CLC).....	1,450	4,382	4,382
Metal Workers' International Association, Sheet (AFL-CIO/CLC).....	4,810	4,812	5,125
Millers, American Federation of Grain (AFL-CIO/CLC).....	200	1,000	1,050
Mine, Mill and Smelter Workers, International Union of (Ind.).....	32,000	32,000	33,000
Mine Workers of America, United (Ind.).....	23,750	26,021	23,604
Molders' and Foundry Workers' Union of North America, International (AFL-CIO/CLC).....	6,800	6,526	6,526
Musicians of the United States and Canada, American Federation of (AFL-CIO/CLC).....	11,381	12,026	12,621
Newspaper Guild, American (AFL-CIO/CLC).....	1,144	1,507	1,995
Office Employees' International Union (AFL-CIO/CLC).....	2,671	3,176	3,800
Oil, Chemical and Atomic Workers International Union (AFL-CIO/CLC).....	4,628	7,976	7,976
Packhouse Workers of America, United (AFL-CIO/CLC).....	21,149	21,857	21,104
Painters, Decorators and Paperhangers of America, Brotherhood of (AFL-CIO/CLC).....	5,703	6,395	6,722
Papermakers and Paperworkers, United (AFL-CIO/CLC).....	6,000	8,000	8,500

35.—Labour Unions Reporting 1,000 or more Members in Canada as at Jan. 1, 1955-57—continued

Organization	Reported or Estimated Membership		
	1955	1956	1957
	No.	No.	No.
International Unions—concluded			
Plasterers' and Cement Masons' International Association of the United States and Canada, Operative (AFL-CIO/CLC).....	1,962	2,308	2,582
Plumbing and Pipe Fitting Industry of the United States and Canada, United Association of Journeymen and Apprentices of the (AFL-CIO/CLC).....	16,139	15,364	17,871
Printing Pressmen and Assistants' Union of North America, International (AFL-CIO/CLC).....	6,845	6,896	6,819
Pulp, Sulphite and Paper Mill Workers, International Brotherhood of (AFL-CIO/CLC).....	31,957	33,890	33,890
Railroad Telegraphers, The Order of (AFL-CIO/CLC).....	9,538	10,041	10,201
Railroad Trainmen, Brotherhood of (Ind.).....	22,101	23,428	24,304
Railway and Motor Coach Employees of America, Amalgamated Association of Street Electric (AFL-CIO/CLC).....	12,143	11,647	11,327
Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, Brotherhood of (AFL-CIO/CLC).....	18,363	20,879	21,061
Railway Carmen of America, Brotherhood of (AFL-CIO/CLC).....	26,356	24,347	24,347
Railway Conductors and Brakemen, Order of (Ind.).....	1,201	2,111	997
Retail Clerks International Association (AFL-CIO/CLC).....	3,604	3,653	4,041
Retail, Wholesale and Department Store Union (AFL-CIO/CLC).....	15,000	11,500	11,500
Rubber, Cork, Linoleum and Plastic Workers of America, United (AFL-CIO/CLC).....	10,400	10,200	10,300
Seafarers' International Union of North America (AFL-CIO/CLC).....	8,400	10,450	10,450
Stage Employees and Moving Picture Machine Operators of the United States and Canada, International Alliance of Theatrical (AFL-CIO/CLC).....	1,779	1,585	1,583
Steelworkers of America, United (AFL-CIO/CLC).....	60,000	70,000	75,000
Teamsters, Chauffeurs, Warehousemen and Helpers of America, International Brotherhood of (AFL-CIO/CLC).....	22,812	26,679	29,275
Textile Workers of America, United (AFL-CIO/CLC).....	5,000	6,403	8,980
Textile Workers Union of America (AFL-CIO/CLC).....	16,750	17,000	17,132
Tobacco Workers' International Union (AFL-CIO/CLC).....	5,323	5,654	5,654
Typographical Union, International (AFL-CIO/CLC).....	6,471	6,653	6,786
Upholsterers' International Union of North America (AFL-CIO/CLC).....	1,959	1,888	1,938
Woodworkers of America, International (AFL-CIO/CLC).....	33,881	40,265	43,911
National Unions			
Authors and Artists, Canadian Council of (CLC).....	—	2,248	2,266
Bâtiment et Fédération du bois Nationale Catholique des Métiers du (National Catholic Federation of Building and of Construction Materials Trades (CCCL).....	19,513	19,104	19,104
Bois ouvré du Canada, Inc., Fédération Catholique des Travailleurs du (Catholic Federation of Wood Workers of Canada, Inc.) (CCCL).....	4,253	4,227	4,213
Chaussure du Canada, Inc., Fédération Nationale du Cuir et de la (National Federation of Leather and Shoe Workers of Canada, Inc.) (CCCL).....	3,800	3,800	3,900
Chimique, Fédération Nationale des Travailleurs de l'Industrie (National Federation of Chemical Workers) (CCCL).....	3,300	3,000	3,200
Civil Servants of Canada, Amalgamated (CLC).....	9,000	9,000	9,989
Civil Service Association of Alberta, The (CLC).....	6,045	6,515	7,081
Civil Service Association, The Saskatchewan (CLC).....	4,730	4,866	4,969
Commerce, Inc., Fédération Nationale Catholique des Employés du (National Catholic Federation of Commerce Employees, Inc.) (CCCL).....	3,600	4,000	4,000
Cultivateurs (Service Forestier), L'Union Catholique des (Catholic Union of Farmers, Forestry Service) (Ind.).....	7,900	12,937	14,359
Fishermen and Allied Workers' Union, United (Ind.).....	6,845	7,031	7,726
Fishermen, Newfoundland Federation of (Ind.).....	4,828	5,200	5,500
Fishermen's Protective Union (Ind.).....	1,500	1,500	1,500
Fish Handlers' Union (Maritime Division), Canadian (CLC).....	1,100	1,000	1,000
Government Employees' Association, British Columbia (CLC).....	9,175	9,483	10,125
Government Employees' Association, Newfoundland (CLC).....	1,200	1,200	1,200
Imprimerie du Canada, Eng., Fédération des Métiers de l' (Federation of Printing Trades of Canada, Reg.) (CCCL).....	3,500	4,250	4,250
Labourers' Union, Newfoundland (Ind.).....	4,000	4,600	5,000
Letter Carriers, Federated Association of (CLC).....	4,058	4,583	5,002
Longshoremen's Protective Union (St. John's) (Ind.).....	2,000	2,000	2,000
Lumbermen's Association, Newfoundland (Ind.).....	6,500	6,500	6,500
Marine Engineers of Canada, Inc., National Association of (CLC).....	1,405	780	1,430
Marine Workers' Federation (CLC).....	2,500	2,600	2,600
Merchant Service Guild, Inc., Canadian (CLC).....	2,006	2,091	2,379
Métallurgie, Fédération Nationale de la (National Metal Trades Federation) (CCCL).....	13,250	15,100	16,230

35.—Labour Unions Reporting 1,000 or more Members in Canada as at Jan. 1, 1955-57—concluded

Organization	Reported or Estimated Membership		
	1955	1956	1957
	No.	No.	No.
National Unions—concluded			
Minière, Inc., Fédération Nationale des Employés de l'Industrie (National Federation of Mining Industry Employees, Inc.) (CCCL).....	4,823	4,674	4,674
Municipales et Scolaires du Canada, Inc., Fédération Nationale des Employés des Corporations (National Federation of Employees of Municipal and School Corporations of Canada, Inc.) (CCCL).....	5,260	5,510	6,014
National Council of Canadian Labour (Ind.).....	4,985	5,640	5,840
One Big Union (CLC).....	12,280	12,189	1,900
Postal Employees Association, Canadian (CLC).....	7,125	7,600	8,900
Public Employees, National Union of (CLC).....	18,000	25,935	30,361
Public Service Employees, National Union of (CLC).....	3,300	16,500	18,000
Pulpe et du Papier, Inc., Fédération Nationale des Travailleurs de la (National Federation of Pulp and Paper Workers, Inc.) (CCCL).....	12,300	10,600	8,500
Radio and Television Employees of Canada, The Association of (CLC).....	900	1,200	1,500
Railway Employees and Other Transport Workers, Canadian Brotherhood of (CLC).....	32,707	33,851	34,436
Railway Mail Clerks' Federation, Canadian (CLC).....	1,143	1,075	1,030
Railwaymen, The Canadian Association of (Ind.).....	1,571	1,239	1,481
Services, Inc., Fédération Nationale Catholique des (National Catholic Federation of Services, Inc.) (CCCL).....	5,500	6,470	6,640
Shipyard General Workers' Federation of British Columbia (CLC).....	2,555	2,550	3,100
Telephone Employees' Association, Canadian (Ind.).....	12,043	13,797	15,680
Telephone Workers of British Columbia, Federation of (Ind.).....	4,311	4,143	4,320
Textile Council, Canadian (Ind.).....	—	1,800	1,800
Textile, Inc., Fédération Nationale Catholique du (National Catholic Textile Federation, Inc.) (CCCL).....	7,440	8,290	8,630
Traffic Employees' Association (Ind.).....	10,138	10,500	10,096
Unemployment Insurance Commission Association, National (CLC).....	5,556	6,000	6,200
Vêtement, Inc., Fédération Nationale des Travailleurs de l'Industrie du (National Federation of Clothing Industry Workers, Inc.) (CCCL).....	5,600	5,200	5,883

Section 10.—Strikes and Lockouts*

The number of strikes in 1956 and the number of workers involved increased from the previous year. However, the significance of the strikes within the economy, as reflected in the number of man-days lost and in the percentage of estimated working time lost, decreased substantially in the second period.

The time loss of about 1,250,000 man-days in 1956 was less than in any one of the previous four years. Similarly, there was a significant drop in the percentage of estimated working time lost and a decrease in the average length of time each worker on strike was idle. These decreases are significant when viewed against the record of bargaining during 1956. Many of the larger bargaining units in several important industries negotiated new contracts during 1956. Among these new agreements, a larger number than in previous years were re-negotiated for periods of longer than one year—the bulk of them for two years. Most settlements included substantial wage and non-wage advances and were reached without interruption to production.

Slightly more than half the strikes occurring in 1956 took place in manufacturing industries, compared with almost two-thirds in this sector in 1955. In fact, the decrease in strike action among workers in manufacturing firms accounted for most of the drop in time lost during 1956. All other industries showed increases in the number of man-days lost; in particular, the mining industry suffered from a large number of small strikes involving relatively limited numbers of workers and of fairly short duration.

* A complete review of strikes and lockouts occurring in each year is given in Department of Labour reports.

36.—Summary Statistics of Strikes and Lockouts 1947-56

Year	Strikes Beginning during the Year	Strikes and Lockouts in Existence in all Industries during the Year						
		Strikes and Lockouts	Employ- ers	Workers Involved	Time Loss			
					Man- Working Days	Average Days per Worker ¹	Average Days per Worker Involved	Estimate of Working Time ¹
	No.	No.	No.	No.	No.	No.	No.	p.e.
1947.....	232	236	1,173	104,120	2,397,340	0.77	23.02	0.26
1948.....	147	154	674	42,820	885,793	0.27	20.68	0.09
1949.....	132	137	542	51,437	1,063,667	0.32	20.68	0.11
1950.....	158	161	345	192,153	1,389,039	0.40	7.23	0.13
1951.....	257	259	646	102,870	901,739	0.24	8.77	0.08
1952.....	216	222	518	120,818	2,879,955	0.76	23.84	0.29
1953.....	167	174	384	55,988	1,324,715	0.35	23.66	0.13
1954.....	156	174	872	62,250	1,475,200	0.39	23.70	0.15
1955.....	149	159	386	60,090	1,875,400	0.47	31.21	0.18
1956.....	221	229	437	88,680	1,246,000	0.29	14.05	0.11

¹Based on the number of non-agricultural wage and salary earners in Canada.

37.—Strikes and Lockouts by Industry 1955 and 1956

Industry	No. of Strikes and Lock- outs	1955				No. of Strikes and Lock- outs	1956			
		Workers Involved		Time Loss			Workers Involved		Time Loss	
		No.	Per- cent- age	Man- Working Days	Per- cent- age		No.	Per- cent- age	Man- Working Days	Per- cent- age
Agriculture.....	1	...	...	...	...	1	...	...	...	...
Logging.....	2	333	0.6	1,565	0.1	7	2,005	2.3	24,570	2.0
Fishing and Trapping.....	...	...	...	...	...	1	...	...	...	...
Mining ²	9	2,092	3.5	17,185	0.9	24	17,974	20.3	58,630	4.7
Coal.....	3	1,221	2.0	4,560	0.2	15	11,619	13.1	24,080	1.9
Other.....	6	871	1.5	12,625	0.7	9	6,355	7.2	34,550	2.8
Manufacturing.....	98	51,520	85.7	1,787,430	95.3	121	57,473	64.7	1,054,560	84.6
Vegetable foods, etc.....	4	1,838	3.1	20,010	1.0	5	817	0.9	13,400	1.1
Tobacco and liquors.....	1	1,386	2.3	3,930	0.2	2	242	0.3	12,840	1.0
Rubber and its products (including synthetic).....	2	1,400	2.3	1,650	0.1	4	1,877	2.1	2,050	0.2
Animal foods.....	1	300	0.5	6,000	0.3	1	93	0.1	300	0.0
Boots and shoes (leather).....	5	405	0.7	9,030	0.5	3	153	0.2	4,820	0.4
Fur, leather and other animal products.....	...	...	...	...	...	3	334	0.4	805	0.1
Textiles, clothing, etc.....	16	3,677	6.1	50,230	2.7	29	13,959	15.7	262,105	21.0
Pulp, paper and paper pro- ducts.....	1	799	1.3	34,800	1.9	4	2,232	2.5	9,755	0.8
Printing and publishing.....	4	121	0.2	6,865	0.4	3	204	0.2	4,720	0.4
Miscellaneous wood pro- ducts.....	14	1,729	2.9	13,090	0.7	14	822	0.9	20,230	1.6
Metal products.....	35	35,768	59.5	1,541,775	82.2	41	33,540	37.8	695,330	55.8
Shipbuilding.....	1	94	0.1	9,640	0.5	2	1,663	1.9	4,465	0.3
Non-metallic minerals, chemicals, etc.....	9	2,323	3.9	45,935	2.5	8	1,359	1.5	17,930	1.4
Miscellaneous products.....	5	1,680	2.8	44,475	2.3	5	178	0.2	5,810	0.5
Construction.....	23	3,259	5.4	37,185	2.0	36	5,322	6.0	40,975	3.3
Buildings and structures.....	20	1,624	2.7	11,540	0.6	30	4,694	5.3	29,695	2.4
Railway.....	1	...	...	...	...	1	...	...	...	...
Bridge ³	1	...	...	...	...	1	...	...	...	...
Highway.....	2	135	0.2	2,645	0.2	1	62	0.1	735	0.1
Canal, harbour, waterway.....	1	...	...	...	...	1	19	0.0	110	0.0
Miscellaneous.....	1	1,500	2.5	23,000	1.2	4	547	0.6	10,435	0.8

For footnotes, see end of table, p. 808.

37.—Strikes and Lockouts by Industry 1955 and 1956—concluded

Industry	1955					1956				
	No. of Strikes and Lock-outs	Workers Involved		Time Loss		No. of Strikes and Lock-outs	Workers Involved		Time Loss	
		No.	Per-cent-age	Man-Working Days	Per-cent-age		No.	Per-cent-age	Man-Working Days	Per-cent-age
Transportation and Public Utilities.....	14	2,232	3.7	27,007	1.4	10	3,891	4.4	38,460	3.1
Steam railways.....	1	...	...	...	...	1	...	...	...	...
Electric railways and local bus lines.....	3	391	0.7	2,270	0.1	2	293	0.3	3,660	0.3
Other local and highway transport.....	2	18	0.0	26	0.0	2	98	0.1	250	0.0
Water transport.....	3	421	0.7	19,400	1.0	4	3,447	3.9	33,450	2.7
Air transport.....	1	...	...	...	...	1	...	...	...	...
Telegraph and telephone...	1	...	...	...	...	1	...	...	...	...
Electricity and gas.....	1	29	0.0	25	0.0	1	...	...	...	...
Miscellaneous.....	5	1,373	2.3	5,286	0.3	2	53	0.1	1,100	0.1
Trade.....	7	257	0.4	898	0.1	19	1,378	1.6	20,780	1.7
Finance.....	1	...	...	...	...	1	...	...	...	...
Service.....	6	397	0.7	4,130	0.2	9	637	0.7	8,025	0.6
Public administration ⁴	3	320	0.6	3,450	0.2	1	...	...	...	...
Recreation.....	1	...	...	...	...	1	...	...	...	...
Business and personal.....	3	77	0.1	680	0.0	9	637	0.7	8,025	0.6
Miscellaneous.....	1	...	...	...	...	1	...	...	...	...
Totals.....	159	60,090	100.0	1,875,400	100.0	229	88,680	100.0	1,216,000	100.0

¹ None reported.² Includes non-ferrous metal smelting.³ Includes erection of all large bridges.⁴ Includes water service.

Section 11.—Canada and the International Labour Organization

The Department of Labour is the officially designated liaison agency between the Government of Canada and the International Labour Organization. The ILO was established in 1919, in association with the League of Nations under the Treaties of Peace, with the object of improving labour and social conditions throughout the world by international agreement and legislative action. Under an agreement approved by the General Conference of the International Labour Organization at its 29th Session held at Montreal, Que., Oct. 2, 1946, and by the United Nations General Assembly on Dec. 14, 1946, the Organization became a specialized agency of the United Nations although retaining its autonomy.

The ILO is an association of 69 Member States, financed by their governments, and democratically controlled by representatives of those governments and of their organized employers and workers. It is comprised of three main organs: (1) the International Labour Conference; (2) the International Labour Office, and (3) the Governing Body. Since World War II the ILO has extended its field of activities by the establishment of eight tripartite industrial committees to deal with problems of important world industries, by the holding of regional and special technical conferences, and by the expanded program of technical assistance to aid the development of backward countries in such fields as co-operatives, vocational training, productivity techniques and employment service organization.

The *International Labour Conference* is a world parliament for the consideration of labour and social problems. It meets annually and is attended by four delegates from each Member State (two representing the Government, one representing the employers and one representing the workers) accompanied by technical advisers. The Conference

formulates international standards concerning working and living conditions in the form of Conventions and Recommendations. A Convention, after adoption, must be considered by the competent authorities in each Member State with a view to possible ratification; however each Member State decides whether or not to ratify any Convention, and only by ratification does it assume the obligation to bring its legislation in that field up to the standard set by the Convention. A Recommendation is less formal: it contains general principles for the guidance of governments in drafting legislation or in issuing administrative orders and is not subject to ratification by the Member States.

The *International Labour Office* acts as the permanent secretariat of the ILO and as a world research and information centre and publishing house on all subjects concerned with industry and labour. In the operational field it assists Member States by furnishing experts on manpower training and technical assistance. The ILO maintains branch offices in all parts of the world, including the Canada Branch, 202 Queen Street, Ottawa.

The *Governing Body* of the ILO, by a constitutional amendment adopted in June 1953, consists of 40 members—20 government representatives, 10 employers' representatives and 10 workers' representatives. Of the government seats, each of the 10 Member States of chief industrial importance (of which Canada is one) holds a permanent place, and the other 10 government representatives are elected triennially by the Conference. The worker and employer members are elected by their groups every three years at the Conference. The Governing Body meets three times a year and has general supervision over the work of the International Labour Office and the various Conferences and Committees, in addition to framing the budget and approving the agendas of the various Conferences. Canada's representative on the Governing Body is G. V. Haythorne, Assistant Deputy Minister of Labour for Canada.

There have been 40 Sessions of the International Labour Conference, at which 107 Conventions and 104 Recommendations have been adopted, covering a wide range of subjects such as industrial relations, freedom of association, hours of work, weekly rest, holidays with pay, minimum wages, night work of women and young persons, industrial health and safety, workmen's compensation, conditions of work for seamen and dockers, unemployment and health insurance, protection of migrant workers, equal remuneration, forced labour, and many other aspects of industrial and social problems. By June 1957 the ratifications of Conventions by Member States totalled about 1,720.

Canada has ratified 18 ILO Conventions, of which 12 concern maritime and dock labour. In Canada the provincial legislatures are the competent legislative authorities with jurisdiction over the subject covered by most of the ILO Conventions and Recommendations. The Department of Labour, as the official liaison agency with the International Labour Organization, is responsible for forwarding to the ILO Office annual reports on ratified Conventions as well as periodical reports on many other industrial and social matters. Canada is represented at most of the ILO annual and special meetings and accounts of the discussions and the decisions are regularly published in the *Labour Gazette*. The Department also keeps the provincial governments and the major employer and worker organizations informed of ILO activities.

CHAPTER XIX.—TRANSPORTATION

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

The physiographic and population characteristics of Canada present unusual difficulties from the standpoint of transportation. The country extends 4,000 miles from east to west and its main topographic barriers run in a north-south direction, so that sections of the country are cut off from one another by such water barriers as Cabot Strait and the Strait of Belle Isle separating the Island of Newfoundland from the mainland; by areas of rough, rocky forest terrain such as the region lying between New Brunswick and Quebec, and the areas north of Lakes Huron and Superior dividing the industrial region of Ontario and Quebec from the agricultural areas of the Prairie Provinces; and by the mountain barriers between the prairies and the Pacific Coast. Unevenly distributed along a narrow southern strip of Canada's vast area is its relatively small population of 16,589,000 (estimate of June 1, 1957). To such a country, with a population so dispersed and producing for export as well as for consumption in distant parts of the country itself, efficient and economical transportation facilities are necessities of existence.

The extent of government control over the agencies of transportation is covered in Part I of this Chapter; Parts II to VI deal with the various types of transport facility.

PART I.—GOVERNMENT CONTROL OVER AGENCIES OF TRANSPORTATION

The Federal Government's control and regulation of transportation reflects to a considerable extent conditions that date back to the period when the railways possessed a virtual monopoly of transportation within the country. Although federal regulation was a direct outcome of such particular matters as the prevention of unjust discrimination in rates and charges resulting from monopoly conditions in the industry and the safety of

transportation facilities and operating practices, yet the railways have been so involved in the public interest that their regulation has been extended to become the most comprehensive of any industry in Canada.

In the meantime, conditions in the transportation industry have been drastically altered by the increasing competition arising from the advance of highway transportation. Unlike the competition that existed between railways in early stages of their development, today's competition shows little indication of starting a trend toward consolidation and a return to semi-monopolistic conditions within the industry. Because so many shippers now provide their own transportation, it is evident that a large part of the present competition between common carriers has become a permanent feature of the transportation industry.

It is not surprising that regulations, which under monopoly conditions were not onerous to the railways or were purely nominal in their effect, are now alleged to have become increasingly restrictive and hampering under highly competitive conditions. Regulatory authorities are therefore faced with the problem of piecemeal revision of their regulations—retaining those where railway monopoly or near-monopoly conditions still make them necessary in the public interest, and relaxing those where competition can be relied on to protect the public in order to enable the railways to meet this competition more effectively. The emphasis has shifted from the regulation of monopoly to maintaining a balance between the several competing modes of transport. Indicative of this trend is the amendment to the Transport Act passed in 1955, which extends the freedom of the railways to make contract rates with shippers known as agreed charges.

On Nov. 2, 1936, the amalgamation of the Department of Railways and Canals and the Department of Marine, together with the Civil Aviation Branch of the Department of National Defence to form the new Department of Transport brought under one control railways, canals, harbours, marine and shipping, civil aviation, radio and meteorology.

Road and highway development is mainly under provincial or municipal control or supervision. According to the Judgment of the Judicial Committee of the Privy Council dated Feb. 22, 1954, jurisdiction over interprovincial and international highway transport rests with the Federal Government. Federal and provincial representatives conferred in Ottawa in April 1954 on means of implementing that decision and on June 26, 1954, the Motor Vehicle Transport Act was passed by the Federal Parliament giving to all provinces, at their option, the authority to apply to interprovincial and international highway transport the same regulations respecting certificates of public convenience and necessity and rates as they apply to undertakings operating entirely within the province. This Act has since been proclaimed in seven provinces.

The Board of Transport Commissioners for Canada.—The Board of Transport Commissioners for Canada was created and initially named the Board of Railway Commissioners for Canada by the Railway Act 1903, and was given its present name by the Transport Act 1938. It was organized on Feb. 1, 1904, and succeeded to all the powers and duties of its predecessor, the Railway Committee of the Privy Council. It was also given additional powers and duties which have been greatly enlarged since that date. When organized, the membership of the Board consisted of a Chief Commissioner, Deputy Chief Commissioner and one Commissioner. In 1908 an Assistant Chief Commissioner and two other Commissioners were added. The Board is a statutory Court of Record, so constituted by the Railway Act and recognized as such by other courts, but it also has extensive regulative and administrative powers.

The great majority of applications and complaints to the Board are disposed of without hearing in open court, but public hearings are held in various places throughout Canada as the Board sees fit, particularly to suit the convenience of the parties and avoid expense to them. Evidence at public hearings is given under oath and interested parties appear personally or by counsel or representatives. The finding or determination of the Board upon any question of fact within its jurisdiction is binding and conclusive and no order or decision may be questioned or reviewed except on appeal to the Supreme Court of

Canada upon a question of law or a question of jurisdiction with leave of a Judge of that Court, or by the Governor in Council.* Two Commissioners are a quorum or 'panel' for the hearing of a case and it is not unusual for two panels to be sitting at the same time on different appeals.

The Board has jurisdiction under more than a score of Acts of Parliament, including jurisdiction under the Railway Act, Transport Act and Pipe Lines Act, over transportation by railway and by inland water; over communication by telephone and telegraph; and over the transmission of oil and natural gas by interprovincial or international pipelines.

Under the Railway Act its jurisdiction is, stated generally, in respect of construction, maintenance and operation of railways that are subject to the legislative authority of the Parliament of Canada, including matters of engineering, location of lines, crossings and crossing protection, safety of train operation, operating rules, investigation of accidents, accommodation for traffic and facilities for service, abandonment of operation, freight and passenger rates, and uniformity of railway accounting. The Board also has certain jurisdiction over telephones and telegraphs, including regulation of the telephone tolls of The Bell Telephone Company of Canada, the British Columbia Telephone Company, the Quebec and Gaspé Telephone Company and the Yellowknife Telephone Company, and over express traffic and tolls for the use of international bridges and tunnels.

The Board has jurisdiction to inquire into, hear and determine any application by any party interested who complains that any company or person has violated or failed to comply with the Railway Act or a Special Act or any Order made thereunder, or who requests the Board to make any order or give any direction, leave, sanction or approval that, by law, it is authorized to make or give or with respect to any matter, act or thing that by the Railway Act or Special Act is prohibited, sanctioned or required to be done. It has power to make orders and regulations generally for carrying the Railway Act into effect and for exercising jurisdiction conferred on the Board by any other Act.

Regulation of railway freight and passenger rates is one of the Board's principal tasks. Except for certain statutory rates, it has power "to fix, determine and enforce just and reasonable rates, and to change and alter rates as changing conditions or cost of transportation may from time to time require"; it may disallow any tariff that it considers to be unjust or unreasonable or contrary to any provision of the Railway Act; it may prescribe other tolls in lieu of the tolls disallowed, or require the railway company to substitute a tariff satisfactory to the Board. Since the end of World War II there has been a succession of applications for authority to make general freight rate increases and general telephone rate increases.

A review of transport regulation was undertaken by the Royal Commission on Transportation, under the chairmanship of the Hon. W. F. A. Turgeon, which held extensive hearings in 1949-50 and issued its Report in 1951. (See 1952-53 Year Book, p. 741.) Certain of its recommendations, including the following, were incorporated into the Railway Act by amendments made in 1951: the equalization of freight rates; the requirement that, when transcontinental competitive freight rates are published, the corresponding rates to intermediate points shall not be more than one-third greater than the former; the payment by the Government of Canada of the cost of maintaining the so-called 'bridge' lines of the transcontinental railway systems in Ontario (between Sudbury, Capreol and Cochrane, and between Port Arthur and Armstrong) up to the amount of \$7,000,000 annually, the amounts so received by the railways to be applied to reductions in freight rates between Eastern and Western Canada over the trackage referred to; and the requirement of a uniform classification of accounts to be prescribed by the Board of Transport Commissioners for the Canadian Pacific Railway and the Canadian National Railways. Pursuant to the amendments, a uniform scale of mileage class rates has been prescribed by the Board and equalization of commodity rates is being proceeded with. The Board has also prescribed a uniform classification and system of accounts for railways and has approved a new freight classification.

* The Board's judgments are reported in *Canadian Railway Cases* and *Canadian Railway and Transport Cases*. and its judgments, orders, rulings and regulations are published fortnightly by the Queen's Printer, Ottawa, in what is known as *J.O.R. & R.*

Under the Transport Act the Board entertains applications for licences for ships to transport goods or passengers for hire or reward between places in Canada on the Great Lakes and the Mackenzie and Yukon Rivers, except goods in bulk on waters other than the Mackenzie River. Before granting a licence the Board must be satisfied that public convenience and necessity require such transport. It also has regulative powers over tolls for such transport.

'Agreed charges' between shippers and carriers, authorized by the Transport Act, were also reviewed by the Hon. W. F. A. Turgeon in 1955 and his recommendations were implemented in amendments to that Act in 1955. Under the amendments, an agreement for an agreed charge shall be executed in tariff form and a duplicate original shall be filed with the Board within seven days after the making of the agreement, and the agreed charge takes effect twenty days after the filing, without necessity of the Board's approval of the charge. The Board continues to have power to fix a charge for a shipper who is unjustly discriminated against by an agreed charge and it also has power to vary or cancel an agreed charge referred to it by the Minister of Transport or Governor in Council for investigation.

Leave of the Board is necessary, under the Pipe Lines Act, for construction of an interprovincial or international gas or oil pipeline. The Board has granted leave to construct such major pipelines as the Trans-Canada natural gas line, the Westcoast Transmission gas line, the Interprovincial oil line, the Trans Mountain oil line and the Trans-Northern oil products line. In considering applications of this kind the Board has regard, among other things, to public interest, financial responsibility of the applicant company and the economic feasibility of the project. It may make orders and regulations for the protection of property and safety in the operation of pipelines. It may also make orders and regulations with respect to all matters relating to traffic, tolls and tariffs of oil pipelines, but it does not have similar powers over gas pipelines. It may declare an oil pipeline company to be a common carrier and may prescribe a uniform system of accounts for pipeline companies.

The Board is required by the Railway Act to make an annual report to the Governor in Council through the Minister of Transport. Copies may be obtained from the Secretary.

The Air Transport Board.—The Air Transport Board was established in September 1944 by amendment to the Aeronautics Act. Subsequent amendments to the Act were made in 1945, 1950 and 1952. The Board has three members including the Chairman, and the staff comprises an Executive Director's Branch including Legal, International Relations, and Traffic Divisions, and a Secretary's Branch including Administrative, Licensing, and Inspection and Enforcement Divisions.

The Board is responsible for the economic regulation of commercial air services in Canada and is also required to advise the Minister of Transport in the exercise of his duties and powers in all matters relating to civil aviation. The regulatory function relates to Canadian air services within Canada and abroad and to foreign air services operating into Canada. It involves the licensing of all such services and the subsequent regulation of the licensees in respect of their economic operation and the provision of service to the public. As provided by the Act, the Board issues Regulations, approved by the Governor in Council, dealing with the classification of air carriers and commercial air services, applications for licences to operate commercial air services, accounts, records and reports, ownership, transfers, consolidations, mergers and leases of commercial air services, traffic tolls and tariffs, and other related matters. Detailed regulatory instructions are issued by the Board in the form of General Orders, published in the *Canada Gazette*, relating to all air services or groups of air services; Board Orders relating to individual air services; and Rules and Circulars for general guidance and information.

Financial and operating statistics are collected under authority of the Board's Regulations by the Economics Division of the Department of Transport.

The Board is currently devoting special attention to the publication of a uniform charter tariff and to the formulation of basic principles for the guidance of operators in the establishment of their rates and fares. Helicopter operations are under constant review by an economic and technical committee set up for the purpose.

In the field of international aviation, the Board continues to take an active part in the work of the International Civil Aviation Organization, a member of its staff being the representative of Canada on the Council.

Canadian Maritime Commission.—By authority of an Act of Parliament (R.S.C. 1952, c. 38) passed in 1947, the Canadian Maritime Commission was constituted for the purpose of examining into, keeping records of, and advising the Minister of Transport on matters pertaining to Canadian shipping and shipbuilding services. In addition to these duties, the Act empowers the Commission to:—

- (1) exercise and perform on behalf of the Minister such powers, duties and functions of the Minister under the Canada Shipping Act 1934, as the Minister may require;
- (2) administer, in accordance with regulations of the Governor in Council, any steamship subventions voted by Parliament; and
- (3) exercise or perform any other powers, duties or functions conferred on or required to be performed by the Commission by or pursuant to any other Act or order of the Governor in Council.

PART II.—RAIL TRANSPORT*

The treatment of rail transport in this Chapter is divided into three Sections dealing, respectively, with railways, express companies and urban transit systems.

Section 1.—Railways

Since Confederation the railways of Canada have been the principal utility for the movement of passengers and freight throughout, and beyond, the nation. The two great national systems, supplemented by a few regional independent railways, are the only carriers able to transport large volumes at low cost in all weather by continuous passage over Canadian transcontinental routes. Though competition by trucking firms is rapidly increasing, the railways still retain their primary position in the transport field.

The two national railway companies control a wide variety of Canadian and international transport and communication services. The government-owned Canadian National Railway System is the country's largest public utility and operates the greatest length of trackage in Canada. In addition, it operates a fleet of coastal and ocean-going steamships, a national telegraph system connecting the principal points of Canada with other parts of the world, an extensive express service in Canada and abroad, a chain of large hotels and resorts, and a scheduled air service connecting all major cities across the country and Canadian with North American and European points. Its chief competitor, the Canadian Pacific Railway, is a joint-stock corporation operating an extensive transcontinental railway supported by a national telegraph system with connections throughout the world, a large fleet of inland, coastal and ocean-going vessels, a chain of year-round and resort hotels, a domestic north-south airline which is one of the world's great air-freight carriers, a transpacific airline service to the Orient and the Antipodes, air services to Mexico, Peru, Chile and Argentina, a transpolar air route connecting Vancouver and Amsterdam, and a transatlantic service to Lisbon. A world-wide express service and a domestic truck and bus network are included in the Company's operations.

The statistics of Subsections 1 to 3 of this Section cover the combined railway facilities of all companies operating in Canada. Details relating to the Canadian National Railway System are dealt with separately in Subsection 4. A special article covering the consolidation and organization of the CNR appears in the 1955 Year Book, pp. 840-847.

* Revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics; more detailed information is given in the annual reports of the Division. Certain of the financial statistics were compiled in co-operation with the Department of Transport.

Subsection 1.—Milage and Equipment

Construction was begun in 1835 on the first railway in Canada—the short link of 14.5 miles between Laprairie and St. Johns, Que.—but only 66 miles were in operation by 1850. The first great period of construction was in the 1850's when the Grand Trunk and the Great Western Railways were built as well as numerous smaller lines. The building of the Intercolonial and the Canadian Pacific Railways contributed to another period of rapid expansion in the 1870's and 1880's. In the last period of extensive railway building (1900-1917), the Grand Trunk Pacific, National Transcontinental and Canadian Northern Railways were constructed.

Only a gradual increase has taken place in the milage of single track line since the 1920's but recently the construction of several large industrial projects in outlying districts has sparked a new phase of railway building. Entirely new districts have been opened up by the construction of the 43-mile Terrace-Kitimat line in British Columbia, the 144-mile Sherridon-Lynn Lake line in Manitoba and the 360-mile Quebec, North Shore and Labrador Railway. A new 80-mile line links Quesnel and Prince George in British Columbia. A 16-mile line connecting the mining community of Nephton with Havelock in eastern Ontario provides easy access to a non-metallic mineral producing area. A new line from Struthers to Geco and one from Hillspoit to Manitouwadge serve this new mining district of northwestern Ontario, and a 161-mile line has been constructed in the Quebec mining area from Beattyville to Chibougamau and St. Félicien. About 29 miles of new track have been completed in Saskatchewan and a 40-mile diversion of the CNR main line between Cornwall and Cardinal in the St. Lawrence Seaway area of Ontario was completed in 1956. In New Brunswick a new 22-mile branch line has been built for the transport of mineral ores. While these new lines have added considerably to the single track milage placed in operation in the past few years, other lines have been abandoned because they were unprofitable so that the new milage is not altogether reflected in the totals.

1.—Railway Track Milage Operated 1900-56

NOTE—Figures of total milage of single track operated for 1835-1909 are given in the 1941 Year Book, p. 546; for 1911-14 in the 1954 edition, p. 786; for 1916-24 in the 1955 edition, p. 830; and for 1925-49 in the 1956 edition, p. 792.

SINGLE TRACK MILEAGE		TRACK MILEAGE BY PROVINCE				
Year	Miles in Operation	Province and Type of Track	1953	1954	1955	1956
	No.		No.	No.	No.	No.
1900.....	17,657	Single—				
1905.....	20,487	Newfoundland.....	705	705	910	934
1910.....	24,731	Prince Edward Island.....	285	285	285	285
1915.....	34,882	Nova Scotia.....	1,396	1,392	1,401	1,391
1920.....	38,805	New Brunswick.....	1,834	1,834	1,800	1,799
		Quebec.....	4,829	4,831	4,936	4,940
1925.....	40,350	Ontario.....	10,386	10,378	10,375	10,516
1930.....	42,047	Manitoba.....	4,979	4,979	4,979	4,974
1935.....	42,916	Saskatchewan.....	8,733	8,721	8,721	8,721
1940.....	42,565	Alberta.....	5,660	5,651	5,659	5,680
1945.....	42,352	British Columbia.....	3,959	3,959	3,981	4,015
		Yukon.....	58	58	58	58
		In United States.....	339	339	339	339
1950 ¹	42,979					
1951.....	42,956	Totals, Single.....	43,163	43,132	43,444	43,652
1952.....	42,953	Second.....	2,485	2,485	2,486	2,476
1953.....	43,163	Industrial.....	2,178	2,181	2,243	2,384
1954.....	43,132	Yard and sidings.....	10,869	10,962	11,142	11,318
1955.....	43,444					
1956.....	43,652	Grand Totals.....	58,695	58,760	59,315	59,830

¹ Newfoundland included from 1950.

Rolling-Stock.—The figures in Table 2 may be supplemented by the statement that between 1949 and 1955 the average capacity of box cars increased from 43.5 tons to 45.8 tons and of gondola cars from 61.5 tons to 64.4 tons, flat cars from 42.9 tons to 45.6 tons, hopper cars from 58.7 tons to 64.6 tons and of all freight cars from 45.3 tons to 48.6 tons. The average tractive power of locomotives advanced during the same period from 41,923 lb. to 42,701 lb. The changeover to diesel operation is indicated by the decrease in steam locomotives and the increase in oil-burning and diesel locomotives in operation.

2.—Railway Rolling-Stock in Operation as at Dec. 31, 1949-55

Type	1949	1951	1953	1954	1955
	No.	No.	No.	No.	No.
Locomotives	4,627	4,715	4,818	4,771	4,714¹
Steam—					
Coal burning.....	4,351	3,553	3,162	2,871	2,521
Oil burning.....		555	667	715	704
Diesel electric.....	246	574	956	1,152	1,455
Electric.....	30	33	33	33	33
Passenger Cars	6,224	6,366	6,456	6,648	6,574
First class.....	1,996	2,169	2,064	2,133	2,058
Second class.....	177	339	331	323	325
Combination.....	337	315	291	254	226
Immigrant.....	347	196	180	196	201
Dining.....	195	153	161	174	172
Parlour.....	175	803	801	956	969
Sleeping.....	775	2,201	2,430	2,418	2,433
Baggage, express and postal.....	1,766	49	59	63	75
Motor.....	54	141	139	131	115
Other.....	402				
Freight Cars	177,614	189,725	187,980	189,351	185,956
Automobile.....	6,075	6,396	7,560	7,439	7,406
Ballast.....	1,772	1,803	1,940	2,245	2,378
Box.....	118,576	121,318	119,753	118,770	114,814
Flat.....	10,951	11,062	11,690	11,782	12,037
Gondola.....	14,135	14,098	17,603	18,469	18,592
Hopper.....	9,100	8,897	11,598	12,129	12,247
Ore.....	1,902	1,902	1,969	2,555	2,559
Refrigerator.....	7,921	8,231	9,438	9,583	9,735
Stock.....	6,648	6,509	6,057	5,972	5,776
Tank.....	454	460	328	363	378
Other.....	80	49	44	44	34

¹ Includes one gasoline locomotive.

Subsection 2.—Finances

The tables in this Subsection give information on capital liability and capital investment, earnings, operating expenses, employees and their earnings and government aid to all railways.* Financial statistics of government-owned railways are given separately and in detail in Subsection 4.

Capital Liability and Investment.—The capital liability of the Canadian railways for the years 1936 to 1955 is shown in Table 3. The increase of \$132,980,501 in 1955 over 1954 compares with an increase in investment in road and equipment of \$227,135,132 as shown in Table 4.

* Statistics for individual railways are given in DBS annual report, *Railway Transport*, published in five parts.

3.—Capital Liability of Railways 1936-55

NOTE.—Figures for 1876 to 1925 are given in the 1927-28 Year Book, p. 649, and those for 1926-35 in the 1947 edition, p. 662.

(Exclusive of Canadian railway capital owned by Canadian railways)

Year	Stocks	Funded Debt	Total	Year	Stocks	Funded Debt	Total
	\$	\$	\$		\$	\$	\$
1936.....	1,425,193,791	3,062,411,720	4,487,605,511	1946.....	1,624,753,709	1,665,844,138	3,290,597,847
1937 ¹	1,839,619,361	1,534,450,789	3,374,070,150	1947.....	1,623,607,219	1,685,010,672	3,308,617,891
1938.....	1,836,882,650	1,568,269,672	3,405,152,322	1948.....	1,578,057,474	1,672,282,030	3,250,339,504
1939.....	1,834,329,209	1,533,373,521	3,367,702,730	1949.....	1,576,734,292	1,692,898,968	3,269,633,260 ²
1940.....	1,762,473,489	1,617,561,683	3,380,035,172	1950.....	1,649,462,088	1,826,346,222	3,475,808,310 ²
1941.....	1,697,545,699	1,699,942,865	3,397,488,564	1951.....	1,646,205,772	1,925,488,160	3,571,693,932 ²
1942.....	1,578,254,765	1,793,579,270	3,371,834,035	1952 ¹	2,406,309,060	1,308,899,612	3,715,208,672 ²
1943.....	1,614,936,131	1,741,664,036	3,356,600,167	1953.....	2,422,692,856	1,439,063,402	3,861,756,258 ²
1944.....	1,636,064,822	1,707,801,676	3,343,866,498	1954.....	2,499,778,848	1,475,815,267	3,975,594,115 ²
1945.....	1,631,973,055	1,701,786,899	3,333,759,954	1955.....	2,543,465,586	1,565,109,030	4,108,574,616 ²

¹ Affected by readjustment in the capital structure of the CNR (see p. 824).
\$40,000,000 railway debt in Newfoundland assumed in 1949.

² Exclusive of approximately

4.—Capital Invested in Railway Road and Equipment 1951-55

Investment	1951	1952	1953	1954	1955 ¹
	\$	\$	\$	\$	\$
New Lines—					
Road.....	6,301,717	11,431,609	8,352,231	6,187,944	15,462,166
Equipment.....	1,552,117	19,210	35,287	45,952	148,572
General.....	53,901	52,510	Cr. 189,856	45,654	221,082
Totals.....	7,907,735	11,503,329	8,197,662	6,279,550	15,831,820
Additions and Betterments—					
Road.....	42,260,214	42,243,299	40,667,130	32,450,253	25,572,002
Equipment.....	107,478,591	128,696,815	156,012,197	192,303,720	77,654,103
General.....	Cr. 70,318	70,585	102,847	Cr. 9,621,920	Cr. 537,488
Undistributed.....	Cr. 2,381	Cr. 2,539	Cr. 134,414	Cr. 19,676	Cr. 15,670
Totals.....	149,666,106	171,008,160	196,647,760	215,112,377	102,672,947
Undistributed ²	Cr. 1,318,920	Cr. 37,797	290,407	182,603	Cr. 12,600,325
Total Investment as at Dec. 31.....	3,940,959,867	4,123,433,559	4,328,569,388	4,550,143,918	4,777,279,050

¹ Includes \$121,230,690 Quebec North Shore and Labrador Railway investment in road and property not previously reported.

² Details given in DBS report, *Railway Transport*.

Revenues and Expenses.—The operating ratio, or ratio of expenditure to revenue, of Canadian railways in 1943 reversed a declining trend and began to rise, mainly because of increasing costs of materials and labour. From 1946 to 1955 operating revenues increased 66.8 p.c. and operating expenses 68.2 p.c. As a result, the net operating revenues per mile of line increased by 49.8 p.c.

5.—Operating Revenues and Expenses of Railways 1946-55

NOTE.—Operating revenues and expenses for 1875 to 1914 are given in the 1916-17 Year Book, p. 434; those for 1915-25 in the 1941 Year Book, p. 550; for 1926-39 in the 1942 Year Book, p. 585; and for 1940-45 in the 1951 Year Book, p. 722. Newfoundland included from Apr. 1, 1949.

Year	Total Operating Revenues	Total Operating Expenses	Ratio of Operating Expenses to Operating Revenues	Per Mile of Line			Freight Train Revenue per Freight Train Mile	Passenger Train Revenue per Passenger Train Mile
				Operating Revenues	Operating Expenses	Net Operating Revenues		
	\$	\$	p.c.	\$	\$	\$	\$	\$
1946	718,501,764	623,529,472	86.79	16,967	14,724	2,243	6.83	3.21
1947	785,177,920	690,821,047	87.98	18,556	16,326	2,230	7.38	3.01
1948	875,832,290	808,126,455	92.27	20,702	19,102	1,600	8.38	2.92
1949	894,397,264	831,456,446	92.96	20,866	19,398	1,468	8.66	3.10
1950	958,985,751	833,726,562	86.94	22,311	19,397	2,914	9.45	3.19
1951	1,088,583,789	977,577,062	89.80	25,348	22,763	2,585	10.05	3.36
1952	1,172,158,665	1,057,186,304	90.19	27,272	24,597	2,675	10.56	3.50
1953	1,205,935,414	1,100,393,836	91.25	28,020	25,567	2,453	11.43	3.53
1954	1,095,440,918	1,019,534,989	93.07	25,402	23,642	1,760	11.58	3.44
1955	1,198,351,601	1,048,564,681	87.50	26,876	23,517	3,359	12.21	3.60

6.—Distribution of Railway Operating Expenses 1953-55

Item	1953		1954		1955	
	\$	p.c.	\$	p.c.	\$	p.c.
Way and structures	227,049,996	20.6	206,712,991	20.3	212,397,087	20.3
Equipment	254,035,999	23.1	227,234,735	22.3	227,866,346	21.7
Traffic	22,839,459	2.1	22,846,030	2.2	23,821,263	2.3
Transportation	516,086,712	46.9	477,118,665	46.8	485,427,650	46.3
General and miscellaneous	80,381,670	7.3	85,622,568	8.4	99,052,335	9.4
Totals	1,100,393,836	100.0	1,619,534,989	100.0	1,048,564,681	100.0

Employment and Salaries and Wages.—In the ten latest years for which figures are available (1946-55) the number of railway employees increased by 8.4 p.c. and their salaries and wages by 70.1 p.c. Maintenance-of-equipment employees, on hourly rates, worked about 10 p.c. fewer hours and were paid 77 p.c. more wages per hour; average

hours worked by transportation employees were 15 p.c. fewer and their pay was about 77 p.c. higher. These figures reflect salary and wage increases received during this period and the conversion to the five-day week in 1951.

7.—Railway Employees and their Earnings 1946-55

NOTE.—Figures include employees and wages for 'outside' operations amounting to from 3 to 6 p.c. of total employees and from 2 to 5 p.c. of total salaries and wages. Figures for 1912-39 are given in the 1941 Year Book, p. 551, and for 1940-45 in the 1951 edition, p. 723. Newfoundland included from Apr. 1, 1949.

Year	Employees	Total Salaries and Wages	Average Salaries and Wages	Ratio of Total Payroll (charged to operating expenses) to—	
				Operating Revenues	Operating Expenses
	No.	\$	\$	p.c.	p.c.
1946.....	180,383	396,856,901	2,200	50.2	57.8
1947.....	184,415	429,843,142	2,331	49.9	56.7
1948.....	189,963	512,054,795	2,696	53.0	57.5
1949.....	192,366	523,453,375	2,721	52.9	56.9
1950.....	190,385	523,008,515	2,747	49.8	57.2
1951.....	204,025	624,682,754	3,062	52.0	58.0
1952.....	214,143	669,457,962	3,126	52.1	57.7
1953.....	211,951	724,077,594	3,416	53.4	58.6
1954.....	196,307	661,829,774	3,371	54.3	58.3
1955.....	195,459	674,875,767	3,453	50.2	57.4

Government Aid to Railways.—In order that the private railways of Canada might be constructed in advance of settlement as colonization roads or through sparsely settled districts where little traffic was available, it was necessary for federal and provincial governments and even for municipalities to extend some form of assistance. The form of aid was usually a bonus of a fixed amount for each mile of railway constructed and, in the early days, grants of land were also made other than for right-of-way. As the country developed, objections to the land-grant method became increasingly apparent and aid was given more frequently in the form of a cash subsidy for each mile of line, a loan or a subscription to the shares of the railway. Guarantees of debenture issues were given in a later period and, since the formation of the Canadian National Railways, all debenture issues of that System, except those for rolling-stock, have been guaranteed by the Federal Government. No new land grants or cash subsidies have been advanced by either the federal or provincial governments since 1939.

During the era of railway expansion before 1918, provincial governments guaranteed the bonds of some railway lines that afterwards were incorporated in the Canadian National Railway System. These bonds as they mature or are called are paid off by the Canadian National Railways, in large measure, through funds raised by the issue of new bonds with Federal Government guarantee. Bonds guaranteed by the Governments of Ontario, Manitoba, Saskatchewan, Alberta and British Columbia have been eliminated in this manner in recent years. The only provincially guaranteed railway bonds outstanding at Dec. 31, 1955, were those of the Government of New Brunswick to the amount of \$465,000. Federal Government guarantees at the same date amounted to \$861,752,955; this amount does not include \$117,944 perpetual debenture stock and guaranteed stock of the former Grand Trunk Railway, now part of the Canadian National Railway System, on which interest and dividends are guaranteed by the Federal Government.

Subsection 3.—Traffic

Table 8 shows passenger and freight statistics for all railways for the years 1946-55. A separate analysis of the operations and traffic of the Canadian National Railways is given at pp. 824-826.

8.—Statistics of Passenger and Freight Services and Revenue Receipts 1946-55

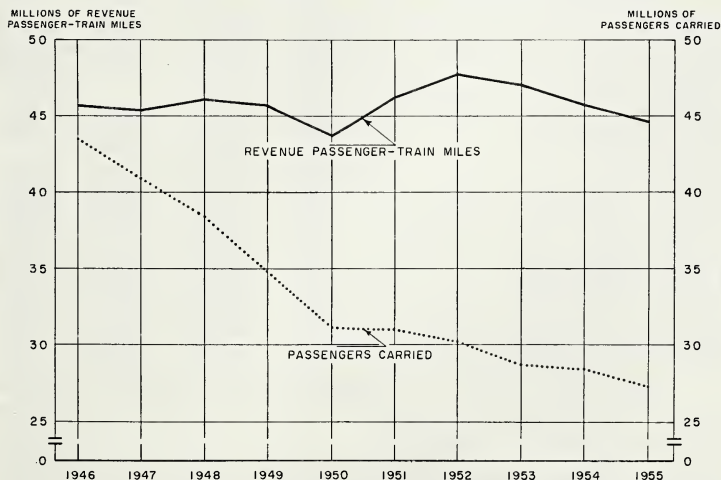
NOTE.—Figures for 1910-45 are given in the corresponding table of previous Year Books.

Year	PASSENGER SERVICE				
	Revenue Passenger- Train Miles ¹	Passenger- Train Car Miles ¹	Passengers Carried ²	Passenger Miles	Passenger Miles per Mile of Line
	No.	No.	No.	No.	No.
1946.....	45,700,856	415,890,589	43,405,177	4,648,558,000	109,773
1947.....	45,367,725	398,646,636	40,941,387	3,732,777,000	88,218
1948.....	46,101,568	410,689,409	38,279,981	3,477,273,000	82,193
1949.....	45,680,009	407,421,229	34,883,803	3,193,174,337	74,497
1950 ³	43,744,164	392,800,555	31,139,092	2,816,154,232	65,519
1951.....	46,200,947	415,178,734	30,995,604	3,110,240,504	72,424
1952.....	47,663,617	431,234,562	30,167,145	3,151,261,385	73,319
1953.....	46,977,271	430,726,717	28,736,159	2,985,943,809	69,378
1954.....	45,745,089	416,969,275	28,396,528	2,863,036,611	66,391
1955.....	44,556,022	417,729,975	27,229,962	2,891,685,018	64,853
	Average Receipts per Passenger Mile	Average Receipts per Passenger	Average Passenger Journey	Average Passengers per Train	Passenger- Train Revenue per Passenger- Train Mile
	cts.	\$	miles	No.	\$
1946.....	2.15	2.30	107	102	3.21
1947.....	2.35	2.14	91	82	3.01
1948.....	2.40	2.18	91	75	2.92
1949.....	2.66 ³	2.44 ³	92 ³	69	3.05
1950 ³	2.79	2.52	90	64	3.19
1951.....	2.86	2.87	100	67	3.36
1952.....	2.88	3.01	104	66	3.50
1953.....	2.88	2.99	104	64	3.53
1954.....	2.87	2.89	101	63	3.44
1955.....	2.87	3.05	106	65	3.60
	FREIGHT SERVICE				
	Revenue Freight- Train Miles	Revenue Freight- Train Car Miles ⁴	Freight Carried ⁵	Freight Ton Miles	Freight Ton Miles per Mile of Line
	No.	No.	tons	ton-miles	ton-miles
1946.....	77,794,963	2,973,411,653	139,256,125	55,310,308,000	1,306,121
1947.....	82,377,565	3,176,646,828	152,855,820	60,143,035,000	1,421,384
1948.....	83,398,617	3,120,704,440	151,932,804	59,080,323,000	1,396,500
1949.....	81,648,053	3,091,633,447	142,719,431 ³	56,338,230,000 ³	1,314,379 ³
1950 ³	81,397,148	3,093,946,961	144,218,319	55,537,900,000	1,292,120
1951.....	87,181,640	3,384,341,192	161,260,521	64,300,418,000	1,497,274
1952.....	89,217,123	3,551,802,171	162,175,381	68,430,417,000	1,592,146
1953.....	84,997,904	3,448,530,542	156,249,259	65,267,016,000	1,516,462
1954.....	75,334,248	3,088,504,846	143,194,840	57,547,300,439	1,333,216
1955.....	79,072,523	3,414,942,330	167,862,156	66,176,128,925	1,483,273

For footnotes, see end of table, p. 821.

8.—Statistics of Passenger and Freight Services and Revenue Receipts 1946-55—concluded

Year	FREIGHT SERVICE—concluded					
	Freight Receipts per Ton per Mile	Receipts per Ton Hauled	Average Length of Freight Haul	Average Train Load, Revenue Tons	Average Load per Loaded Car Mile	Revenue per Freight-Train Mile
	cts.	\$	miles	tons	tons	\$
1946.....	0.961	3.82	397	711	29.95	6.83
1947.....	1.009	3.98	393	730	30.23	7.38
1948.....	1.183	4.51	381	708	30.16	8.38
1949.....	1.256 ³	4.96 ³	395 ³	689	29.65	8.62
1950 ³	1.385	5.33	385	682	28.91	9.45
1951.....	1.362	5.43	399	738	30.61	10.05
1952.....	1.377	5.81	422	767	31.68	10.56
1953.....	1.489	6.22	418	768	31.16	11.43
1954.....	1.516	6.09	402	764	30.34	11.58
1955.....	1.460	5.75	394	837	31.30	12.21

¹ Includes express, baggage, mail and other cars.
included from 1950.² Duplications included.³ Newfoundland⁴ Includes caboose miles but excludes miles made in passenger and non-revenue trains.⁵ Duplications eliminated; see Table 9 for details of freight carried.REVENUE PASSENGER-TRAIN MILES AND
PASSENGERS CARRIED, 1946-55

The amount of revenue freight carried on the railways in 1955 was 17 p.c. higher than that carried in 1954. Of the 167,862,156 tons moved in 1955, mine products accounted for 41.6 p.c., manufactures and miscellaneous products 30.4 p.c., agricultural products 16.2 p.c., forest products 10.6 p.c., and animals and animal products 1.2 p.c. As compared with 1954, mine products carried increased by 35.2 p.c., manufactures and miscellaneous 13.2 p.c., forest products 10.5 p.c., and animals and animal products 3.7 p.c. The agricultural products group was the only one showing a decrease, dropping 4.3 p.c. The largest increase among the individual commodities carried was shown by ores and concentrates.

9.—Commodities Hauled as Freight on Railways 1952-55

NOTE.—In this table duplications are eliminated, i.e., the same freight handled by two or more railways is counted only once. The statistics do not include the United States lines of the Canadian National Railways, but the link of the Canadian Pacific Railway line across Maine, U.S.A., is included, as are the Canadian sections of United States railways.

Commodity	1952	1953	1954	1955
	tons	tons	tons	tons
Agricultural Products.....	37,402,773	36,305,797	28,494,112	27,275,365
Wheat.....	19,026,645	18,463,859	11,501,780	11,421,085
Oats.....	3,219,709	3,188,551	2,477,983	1,544,263
Other grain.....	6,465,472	6,301,193	5,197,858	4,840,613
Flour.....	2,233,819	2,043,808	1,842,171	1,735,338
Other mill products.....	2,584,815	2,327,895	2,812,505	2,901,298
Other agricultural products.....	3,872,313	3,980,491	4,661,815	4,832,768
Animal Products.....	1,693,699	1,868,285	1,992,487	2,065,582
Livestock.....	679,624	670,040	652,161	636,894
Meats and other edible packing-house products....	496,038	656,695	699,256	724,399
Other animal products.....	518,028	541,550	641,070	704,289
Mine Products.....	54,821,932	53,081,658	51,654,754	69,815,307
Coal, anthracite.....	3,879,154	2,911,118	2,737,944	2,722,466
Coal, bituminous, subbituminous, lignite.....	17,528,715	15,551,846	15,438,742	15,367,402
Coke.....	2,145,360	1,802,753	1,541,979	724,399
Ores and concentrates.....	12,876,555	13,007,268	13,188,073	25,253,017
Base bullion, matte, pig and ingot (non-ferrous metals).....	1,428,033	1,451,520		
Sand and gravel.....	4,503,818	5,646,813	5,123,134	6,913,537
Stone (crushed, ground, broken).....	3,903,012	4,087,903	2,759,503	3,787,020
Other mine products.....	8,557,285	8,622,437	10,865,379	13,902,291
Forest Products.....	19,330,157	16,194,487	16,028,934	17,716,722
Logs, posts, poles, piling.....	2,372,333	1,947,648	1,855,530	2,140,987
Cordwood and other firewood.....	282,089	178,459	126,082	93,753
Pulpwood.....	8,663,783	5,878,947	6,131,899	6,018,071
Lumber, timber, box, crate and cooperage material.	7,153,936	7,237,941	7,093,440	8,469,824
Other forest products.....	858,016	951,492	821,983	994,087
Manufactures and Miscellaneous.....	48,926,829	48,799,032	45,021,553	50,989,180
Gasoline and petroleum products.....	7,460,770	7,611,184	7,948,948	8,629,172
Iron and steel (bar, sheet, structural pipe).....	3,454,358	3,409,566	2,918,011	3,790,921
Automobiles, trucks and parts.....	2,302,126	2,809,963	1,514,478	2,784,925
Newsprint.....	4,010,699	3,927,865	4,082,615	4,245,705
Pulp.....	2,178,170	2,074,796	2,210,580	2,505,198
Other manufactures and miscellaneous.....	26,654,758	26,247,295	24,134,606	26,805,939
Merchandise ¹ (all L.C.L. freight).....	2,865,948	2,718,363	2,215,315	2,227,320
Grand Totals.....	162,175,381	156,249,259	143,194,840	167,862,156

¹ Less than carload lots.

Railway Accidents.—In Tables 10 and 11 all passengers injured were included in the figures but, for employees, only injuries were recorded that kept the employee from his work for at least three days during the ten days following the accident.

10.—Passengers, Employees and Others Killed or Injured on Railways 1946-55

NOTE.—Figures for 1919-45 are given in the corresponding tables of previous Year Books beginning with the 1922-23 edition.

Year	Passengers		Employees		Others ¹		Totals	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
	No.	No.	No.	No.	No.	No.	No.	No.
1946.....	3	526	105	11,406	219	706	327	12,638
1947.....	35	464	103	10,620	262	755	400	11,839
1948.....	15	351	99	9,980	271	825	385	11,156
1949 ²	1	316	71	8,794	257	824	329	9,934
1950.....	18	297	67	8,108	232	744	317	9,149
1951.....	5	221	84	7,651	301	723	390	8,595
1952.....	2	183	74	7,019	317	707	393	7,909
1953.....	4	181	35	5,917	266	727	305	6,825
1954.....	4	251	48	4,654	245	586	297	5,491
1955.....	1	235	48	4,467	258	552	307	5,254

¹ Includes trespassers walking along tracks, stealing rides, etc., and persons crossing tracks at level crossings.

² Newfoundland included from Apr. 1, 1949.

Accidents tabulated include all those in which railway trains were involved and accidents on railway property. The classification of accidents used for DBS vital statistics treats collisions between motor vehicles and trains as motor vehicle accidents; provincial statistics also class them as motor vehicle accidents and consequently adjustments should be made when compiling total accidental deaths of all kinds or comparing results of accidents of different kinds, such as train and motor vehicle.

11.—Persons Killed or Injured on Railways by Specified Cause 1953-55

Class of Person and Description of Accident	1953		1954		1955	
	Killed	Injured	Killed	Injured	Killed	Injured
ACCIDENTS RESULTING FROM MOVEMENT OF TRAINS, LOCOMOTIVES OR CARS						
Class of Person—	No.	No.	No.	No.	No.	No.
Passengers.....	3	133	4	215	1	188
Employees.....	20	2,017	37	1,646	39	1,582
Trespassers.....	77	90	71	57	71	61
Non-trespassers.....	174	479	169	417	180	413
Postal clerks, expressmen, etc.....	6	62	—	24	1	18
Totals.....	290	2,781	281	2,359	292	2,262
Description of Accidents (Employees and Passengers only)—						
Coupling and uncoupling.....	1	78	4	70	1	88
Collisions.....	9	112	11	201	11	160
Derailments.....	7	109	9	91	5	36
Locomotives or cars breaking down.....	—	—	—	2	1	4
Falling from trains or cars.....	3	117	3	86	3	107
Getting on or off trains.....	—	457	1	344	1	361
Struck by trains, etc.....	6	32	5	22	12	21
Overhead and other obstruction.....	—	36	2	11	—	22
Other causes.....	7	1,209	6	1,034	6	971
Totals.....	33	2,150	41	1,861	40	1,770
ALL OTHER ACCIDENTS						
Class of Person—	No.	No.	No.	No.	No.	No.
Stationmen.....	—	564	1	461	—	380
Shopmen.....	2	1,428	4	1,102	—	1,047
Trackmen.....	3	1,382	3	980	5	940
Other employees.....	—	526	3	465	4	518
Passengers.....	1	48	—	36	—	47
Others.....	9	96	5	88	6	60
Totals.....	15	4,044	16	3,132	15	2,992

Subsection 4.—The Canadian National Railway System*

In view of the interest in Canada's publicly owned railway, the Canadian National Railway System is given separate treatment in this Subsection. Its history is presented in a special article published in the 1955 Year Book at pp. 840-847. More detailed information than can be given here is obtainable from DBS annual report, *Canadian National Railways*.

Financial Statistics.—The original financial Structure of the CNR and the steps taken through the Capital Revision Acts of 1937 and 1952 to alleviate the burden of interest debt undertaken by the Company on its formation in 1923 are described in the special article mentioned above. Briefly, the Capital Revision Act of 1937 wrote off all loans that had been made to cover deficits and also unpaid interest on loans, and certain loans made for the purpose of additions and betterments were converted to equity capital, relieving the CNR from paying fixed charges on this amount. Under the 1952 Capital Revision Act, 50 p.c. of the Company's interest-bearing debt was changed to preferred stock on which, after settling income taxes, a dividend of 4 p.c. is paid on earnings. Also for a term of ten years ending Dec. 31, 1961, the Railway is not obliged to pay interest on \$100,000,000 of its long-term debt. The Government is authorized to buy additional preferred stock annually in amounts related to the Company's gross revenues. As a consequence, the proportion of total capitalization represented by equity capital in shareholders' account was raised from 34.5 p.c. at Dec. 31, 1951, to 67.2 p.c. at Jan. 1, 1952, and the proportion of borrowed capital was correspondingly reduced.

12.—Capital Structure of the Canadian National Railway System as at Dec. 31, 1946-56

NOTE.—Information given in greater detail in DBS report, *Canadian National Railways*.

At Dec. 31—	Shareholders' Capital		Funded Debt Held by Public		Government Loans and Appropriations—Active Assets in Public Accounts	Totals
	Government of Canada Shareholders' Account	Capital Stock Held by Public	Guaranteed by Federal and Provincial Governments	Other		
	\$	\$	\$	\$	\$	\$
1946.....	776,018,575	4,635,440	488,772,318	41,650,680	718,537,286	2,029,614,299
1947.....	774,195,901	4,570,940	538,759,177	44,100,584	689,470,349	2,051,096,951
1948.....	774,242,649	4,567,540	492,437,507	91,795,151	760,494,825	2,123,537,672
1949.....	774,448,716	4,560,290	539,706,744	85,159,176	743,661,162	2,147,536,088
1950.....	776,395,649	4,520,890	566,418,607	92,611,634	739,847,514	2,179,794,294
1951.....	776,395,649	4,518,890	518,396,607	96,800,428	857,573,774	2,253,685,348
1952.....	1,531,072,324	4,516,490	518,396,607	87,098,222	228,055,165	2,369,138,808
1953.....	1,552,050,067	4,514,490	513,977,391	75,834,299	342,140,048	2,488,516,295
1954.....	1,571,393,181	4,514,490	910,422,885	62,546,711	126,771,981	2,675,649,248
1955.....	1,591,902,624	4,511,150	861,870,899	34,493,192	199,444,622	2,692,222,487
1956.....	1,616,270,966	4,508,670	794,482,906	25,086,606	353,664,828	2,794,013,976

In Table 13, the assets of the Canadian National Railway System as at Dec. 31, 1955, are compared with those at the time of consolidation of the System.

* The Hudson Bay Railway is a direct responsibility of the Federal Government and has been operated by the CNR for the Government since Apr. 1, 1935; statistics relating to the operation of this line are not included in the data for the CNR.

13.—Assets of the Canadian National Railway System as at Dec. 31, 1922 and 1955

Account	Dec. 31, 1922	Dec. 31, 1955	Increase or Decrease
	\$	\$	\$
Investments	1,842,428,131	2,838,826,905	996,398,774
Road and equipment.....	1,765,323,644	2,677,652,227	972,328,583
Improvements on leased railway property.....	1,492,123	1,215,945	-276,178
Sinking funds.....	4,629,855	—	-4,629,855
Deposits in lieu of mortgaged property sold.....	6,171,808	24,701	-6,147,107
Miscellaneous physical property.....	34,767,914	78,422,696	43,654,782
Affiliated companies.....	24,253,323	79,819,560	55,566,237
Other investments.....	5,789,464	1,691,776	-4,097,688
Current Assets	87,580,218	196,970,508	109,390,290
Cash.....	14,651,422	53,998,888 ¹	39,347,466
Special deposits.....	6,139,435	3,013,767	-3,125,668
Loans and bills receivable.....	11,600	—	-11,600
Traffic and car service, balances receivable.....	2,528,622	—	-2,528,622
Net balances receivable from agents and conductors.....	5,386,673	30,411,032	25,024,359
Miscellaneous accounts receivable.....	16,857,420	26,225,288	8,367,868
Materials and supplies.....	41,408,999	76,006,729	34,597,730
Interest and dividends receivable.....	377,003	186,023	-190,980
Rents receivable.....	112,269	—	-112,269
Other current assets.....	106,775	7,128,781	7,022,006
Deferred Assets	12,325,297	154,904,644	142,579,347
Working fund advances.....	166,847	621,339	454,492
Insurance and other funds.....	352,488	15,000,000	14,647,512
Pension contract fund.....	—	128,000,000	128,000,000
Other deferred assets.....	11,805,962	11,283,305	-522,657
Unadjusted Debits	15,697,557	19,163,906	3,466,349
Rents and insurance premiums paid in advance.....	322,059	3,397,307	3,075,248
Discount on capital stock.....	634,960	—	-634,960
Discount on funded debt.....	1,919,635	6,298,218	4,378,583
Other unadjusted debits.....	12,820,903	9,468,381	-3,352,522
Grand Totals	1,958,031,203	3,209,865,963	1,251,834,760

¹ Includes temporary cash investments.

Operating Finances.—Total revenue, operating expenditure and net revenue include only those from railway and commercial telegraph operations but the deficits are for the entire System, including the operating results of the Niagara, St. Catharines and Toronto Railway (electric) and other railways operated separately, hotels, commercial telegraphs, coastal steamships and all other outside operations.

14.—Total Revenue, Operating Expenditure, Net Revenue, Fixed Charges and Deficits of the Canadian National Railway System¹ 1946-55

NOTE.—Figures for 1911-25 are given in the 1936 Year Book, p. 660; for 1926-39 in the 1942 Year Book, p. 590; and for 1940-45 in the 1951 edition, p. 731. Newfoundland is included from Apr. 1, 1949.

Year	Total Operating Revenue	Total Operating Expenditure	Income Available for Fixed Charges	Total Fixed Charges	Net Income or Deficit ²	Cash Deficit or Surplus ³
	\$	\$	\$	\$	\$	\$
1946.....	400,586,026	357,236,718	37,239,784	46,685,316	Dr. 9,445,532	Dr. 8,961,570
1947.....	438,197,980	397,122,607	29,330,757	45,925,891	" 16,505,134	" 15,885,194
1948.....	491,269,950	464,739,970	12,502,931	46,341,727	" 33,838,796	" 33,532,741
1949.....	500,723,386	478,501,660	6,152,649	48,631,896	" 42,479,247	" 42,043,027
1950.....	553,831,581	493,997,079	44,084,904	47,421,983	" 3,337,079	" 3,261,235
1951.....	624,834,120	580,150,221	31,722,489	48,176,558	" 16,454,069	" 15,031,996
1952.....	675,219,415	634,852,915	25,702,660	25,415,189	Cr. 287,471	Cr. 142,327
1953.....	696,622,451	659,049,086	29,238,623	29,376,160	Dr. 137,537	" 244,017
1954.....	640,637,280	626,465,374	7,574,821	32,527,264	" 24,952,443	Dr. 28,758,098
1955.....	683,088,794	629,013,125	43,478,955	33,004,300	Cr. 10,474,655	Cr. 10,717,689

¹ Includes the Central Vermont Railway, Incorporated.² Includes appropriations for insurance fund.³ Contributed by or paid to the Federal Government.

Milage and Traffic.—At Dec. 31, 1955, main-track milage (exclusive of electric lines) of the Canadian National Railways (including lines in the United States and Newfoundland but exclusive of the Northern Alberta Railways and Toronto Terminals Railway lines controlled jointly by the Canadian National and the Canadian Pacific Railways) was 24,277.9 miles. Including the Thousand Islands Railway, 4.51 miles, controlled but operated separately, the total milage was 24,282.4. The grand total, including 70.2 miles of electric line, was 24,352.6 miles.

15.—Train Traffic Statistics of the Canadian National Railways (Canadian and United States Lines) 1953-55

(Exclusive of electric line)

Milage and Traffic	1953	1954	1955
Train Milage.....miles	73,791,657¹	68,020,618¹	68,725,003
Passenger service....."	24,949,141	24,315,627	23,559,606
Freight service....."	46,883,109	41,691,390	43,128,824
Work service....."	1,959,407	2,013,601	2,036,573
Passenger-Train Car Milage.....miles	232,400,747	223,407,059	224,083,492
Coaches and combination....."	67,478,350 ¹	61,520,399 ¹	58,262,739 ¹
Motor unit cars....."	1,021,566	1,047,101	1,264,116
Parlour, sleeping and dining cars....."	64,340,084	63,607,197	66,111,326
Baggage, mail, express, etc....."	99,560,767	97,232,362	98,445,311
Freight-Train Car Milage.....miles	1,987,320,004	1,811,359,472	1,935,098,616
Loaded freight....."	1,308,501,856	1,183,987,402	1,268,426,467
Empty freight....."	632,418,375	585,973,718	623,331,197
Caboose....."	46,399,773	41,398,352	43,340,952
Work-Train Car Milage.....miles	3,531,351	4,295,991	4,058,029
Passenger Traffic—			
Passengers carried (earning revenue).....No.	18,080,958	17,858,916	16,811,280
Passengers carried (earning revenue) one mile....."	1,538,832,219	1,471,708,931	1,463,653,329
Passenger-train miles per mile of road....."	1,033	1,007	972
Average passenger journey.....miles	85.11	82.41	87.06
Average amount received per passenger.....\$	2.53948	2.45015	2.61313
Average amount received per passenger mile.....\$	0.02984	0.02973	0.03001
Average passengers per train mile.....No.	61.68	60.53	62.13
Average passengers per car mile....."	12.40	12.53	12.55
Total passenger-train earnings per train mile.....\$	3.98	3.90	4.11
Total passenger-train revenue per mile of road.....\$	4,113.98	3,926.55	3,994.15
Freight Traffic—			
Revenue freight carried.....tons	86,523,327	79,338,230	87,606,859
Revenue freight carried one mile....."	36,677,980,252	32,881,706,496	35,677,183,245
Revenue freight carried one mile per mile of road....."	1,513,672	1,356,505	1,466,853
Total (all classes) freight carried one mile per mile of road....."	1,626,843	1,443,839	1,544,752
Average tons revenue freight per train mile.....No.	782	789	827
Average tons (all classes) freight per loaded car mile....."	30.03	29.46	29.53
Average hauls revenue freight.....miles	423.91	414.45	407.24
Freight revenue per train mile.....\$	11.81	12.06	12.50
Freight revenue per mile of road.....\$	22,921.32	20,816.40	22,245.23
Freight revenue per ton.....\$	6.40	6.34	6.15
Freight revenue per ton mile.....\$	0.01501	0.01529	0.01511

¹ Excludes work service.

Section 2.—Express Companies

Express, which is actually expedited freight carried on passenger trains, is one of the services provided by companies which do not own the means of conveyance but use the facilities of railway companies under contract. The majority of such contracts provide for payment to the railways of a fixed percentage of the gross express revenue.

Express companies are organized under authority of federal legislation and their business concerns the rapid transit of valuable or perishable commodities and animals, the delivery of parcels and the issuing of financial papers, money orders, travellers' cheques and letters of credit. Express rates are usually much higher than freight rates and the two services are not normally competitive. Both tariffs are subject to the approval of the Board of Transport Commissioners.

Four express organizations operate in Canada—three Canadian and one American. The Canadian Pacific Express Company is a subsidiary of the Canadian Pacific Railway Company and handles the express business on the railways and the inland and ocean steamship lines of the parent company. The express business of the Canadian National and Northern Alberta Railways is handled by departments of the respective railways. The Railway Express Agency, Incorporated, of the United States operates over the Canadian sections of United States railways and over the route from Skagway in Alaska to points in Yukon Territory. No statistics are available on the volume of express traffic because much of it consists of parcels and small lots that cannot be classified.

16.—Summary Statistics of Express Companies 1946-55

NOTE.—Figures for 1911-45 are given in the corresponding table of previous Year Books beginning with the 1927-28 edition.

Year or Company	Milages Operated ¹	Gross Earnings	Operating Expenditure	Express Privileges ²	Net Operating Revenue
	No.	\$	\$	\$	\$
1946.....	51,365	39,260,553	22,670,616	16,841,229	Dr. 251,292
1947.....	51,341	42,314,758	25,770,190	17,650,061	Dr. 1,105,493
1948.....	51,840	46,809,112	30,398,053	18,785,988	Dr. 2,374,929
1949.....	54,806	51,966,290	32,385,223	21,226,817	Dr. 1,645,750
1950.....	55,581	52,017,492	32,881,689	21,355,956	Dr. 2,220,153
1951.....	57,355	60,423,503	38,374,128	21,037,164	1,012,211
1952.....	57,335	70,185,114	44,744,018	24,428,739	1,012,357
1953.....	55,805	74,296,948	49,569,842	23,584,806	1,142,300
1954.....	68,373 ³	70,039,054	48,167,243	20,753,503	1,118,308
1955.....	65,916 ⁴	73,434,962	48,726,272	23,533,770	1,174,920
1955					
Canadian National Express.....	40,805	38,353,086	25,964,276	11,730,432	658,378
Canadian Pacific Express.....	21,529	32,835,695	21,650,032	10,737,173	448,490
Northern Alberta Railways.....	928	692,741	328,893	307,672	56,176
Railway Express Agency, Inc. (U.S.A.)..	2,654	1,553,440	783,071	758,493	11,876

¹ Over railways, boat lines and motor carrier and aircraft routes. ² Amounts paid by express companies to the carriers, i.e., railways, steamship lines, etc., for transporting express matter. ³ 12,290 aircraft miles were reported by the Canadian National Express. ⁴ 9,286 and 1,194 aircraft miles reported by Canadian National Express and Railway Express Agency, Inc., respectively.

17.—Business Transacted by Express Companies in Financial Paper 1951-55

Item	1951	1952	1953	1954	1955
	\$	\$	\$	\$	\$
Money orders, domestic and foreign....	137,215,925	134,870,537	134,996,758	130,807,463	133,479,411
Travellers cheques, domestic and foreign.....	7,753,328	7,332,881	7,589,928	7,788,302	8,110,137
C.O.D. cheques.....	24,186,587	23,826,544	22,144,909	20,966,806	20,656,753
Telegraphic transfers.....	191,188	255,243	274,705	214,475	167,577
Totals.....	169,347,028	166,285,205	165,006,300	159,777,046	162,413,878

18.—Employees, Salaries, Wages and Commissions of Express Companies 1946-55

Year	Full-Time Employees	Salaries and Wages ¹	Com-missions Paid	Year	Full-Time Employees	Salaries and Wages ¹	Com-missions Paid
	No.	\$	\$		No.	\$	\$
1946.....	7,430	16,060,439	1,975,856	1951.....	9,610	28,607,463	2,443,341
1947.....	8,017	18,308,793	1,995,947	1952.....	10,849	32,503,058	2,689,830
1948.....	8,525	22,212,249	2,157,489	1953.....	12,119	37,413,060	2,795,766
1949.....	8,809	23,621,322	2,283,425	1954.....	11,450 ²	35,882,288	2,691,440
1950.....	8,974	24,195,490	2,177,933	1955.....	11,593 ²	36,200,739	2,745,259

¹ Includes wages paid to part-time employees.² Includes part-time employees.

Section 3.—Urban Transit Systems

The collection of statistical information on urban transportation systems is undergoing extensive reorganization. Such drastic changes have been made in recent years in the types of vehicles used for mass passenger movement in urban centres that the statistical series, which began with the financial and operating statistics of electric railways and later included their motor bus and trolley coach lines, has become inadequate.

The new series will cover all transit systems including electric railway, subway, motor bus, motor coach or trolley coach operation carrying passengers in urban, suburban or interurban service. A transit system may mean any one of these operations or any combination of them. Table 19 gives currently available summary statistics for all urban transit systems. Tables 20 to 23 give the latest information on electric railway systems, continuing the series presented in previous editions of the Year Book until the new, more comprehensive series becomes available.

19.—Summary Statistics of Urban Transit Systems 1955-57

Item		1955 ²	1956	1957
Passengers Carried.....	No.	1,211,639,415	1,174,547,450	1,137,667,983
Electric car.....	"	398,439,820 ¹	340,650,647 ¹	291,285,791 ¹
Trolley bus.....	"	241,401,062	234,500,323	231,967,345
Motor bus.....	"	568,070,562	592,458,533	606,406,554
Chartered.....	"	3,727,971	6,937,947	8,008,293
Vehicle-Miles Run.....	No.	209,791,650	211,707,516	207,492,365
Electric car.....	"	53,951,724 ²	48,468,311 ²	43,229,966 ²
Trolley bus.....	"	38,003,904	37,751,069	37,411,448
Motor bus.....	"	115,966,244	122,844,108	124,416,243
Chartered.....	"	1,869,778	2,644,028	2,434,708
Fuel Consumed—				
Gasoline.....	gal.	17,699,183	16,775,047	14,274,018
Propane gas.....	"	352,229	338,406	298,115
Diesel oil.....	"	6,435,627	8,977,833	11,065,922
Gross Passenger Revenue.....	\$	120,151,553	128,945,040	131,838,270

¹ Includes 35,147,070 passengers carried by the Toronto subway in 1955, 36,224,003 passengers in 1956 and 36,579,014 in 1957.

² Includes 5,597,500 miles run by the Toronto subway cars in 1955, 6,152,164 miles in 1956 and 6,981,792 in 1957.

Electric Railway Systems.—The statistics given here cover the urban and interurban operations of electric railway systems. Almost all the urban systems are now municipally owned, the largest privately owned system being the British Columbia Electric Railway Company; most of the interurban firms are controlled either by the Canadian National or Canadian Pacific Railways. The number of electric railways declines each year as motor and trolley buses replace electric cars. Of the 21 systems in service in 1955, five operated electric cars, motor buses and trolley buses; nine operated trolley buses and motor buses; three operated electric cars only; one operated electric cars and motor buses; one, trolley buses only; one, motor buses only; and one reported no electric cars, motor buses or trolley buses.

20.—Equipment of Electric Railways 1953-55

Equipment	1953	1954	1955	Equipment	1953	1954	1955
	No.	No.	No.		No.	No.	No.
Passenger Vehicles	5,602	5,629	5,648	Other Vehicles	661	648	642
Closed cars.....	2,212	2,112	1,837	Baggage, express and mail cars.....	10	7	4
Open cars.....	4	4	4	Freight cars.....	82	89	87
Combination passenger and baggage cars.....	5	5	2	Locomotives.....	56	56	55
Cars without electrical equipment.....	91	16	6	Snow ploughs.....	46	42	34
Motor buses.....	2,177	2,348	2,656	Sweepers.....	65	54	38
Trackless trolley buses.....	1,113	1,144	1,143	Trucks.....	221	224	254
				Miscellaneous.....	181	176	170

The financial statistics of electric railways given in Table 21 have been greatly affected by variations in traffic and by changes in mode of local transportation. When electric railways have ceased operation because of declining traffic or have substituted other types of rolling-stock their figures have been dropped from the tabulation. Despite changing conditions, however, the gross revenue of electric railways has continued to rise in the postwar years. The ratio of expenses to receipts advanced from 86.3 p.c. in 1946 to 99.9 p.c. in 1955. Many systems have changed from private to public ownership in the past few years which accounts for much of the recorded decline in the value of stocks and the increase in funded debt.

21.—Financial Statistics of Electric Railways 1946-55

NOTE.—Figures for 1901-45 are given in the corresponding table of previous Year Books beginning with the 1926 edition.

Year	Capital Liability			Investment in Road and Equipment	Operating Revenues	Operating Expenses	Ratio of Expenses to Revenues	Em- ployees	Salaries and Wages
	Stocks	Funded Debt	Total						
	\$	\$	\$	\$	\$	\$	p.c.	No.	\$
1946....	35,656,763	132,042,089	167,698,852	203,537,797	87,515,721	75,550,821	86.33	21,700	45,675,363
1947....	33,915,932	138,246,540	172,162,472	218,439,361	86,519,712	81,787,723	94.53	22,627	50,117,441
1948....	28,138,481	140,692,280	168,830,761	217,385,299	89,310,215	88,024,727	98.56	22,593	55,268,083
1949....	27,425,491	143,944,716	171,370,207	242,095,483	95,596,394	92,378,848	96.63	21,661	59,155,065
1950....	27,252,391	159,192,587	186,444,978	223,224,556	91,034,058	89,414,380	98.22	21,869	57,645,574
1951....	20,252,391	179,159,159	199,411,550	255,057,250	99,114,548	97,880,959	98.76	21,052	64,188,551
1952....	5,535,795 ¹	147,980,882 ¹	153,516,177	260,037,852	104,028,691	101,110,712	97.20	20,268	67,252,025
1953....	4,336,065	181,781,857	186,117,922	283,256,339	107,990,692	105,027,443	97.26	20,408	68,638,778
1954....	4,336,065	188,560,830	192,896,895	291,138,722	109,334,662	109,006,301	99.70	20,318	70,109,414
1955....	3,893,725	180,906,824	184,800,549	294,095,916	109,617,497	109,576,378	99.96	19,280	69,632,464

¹ Decrease from 1951 accounted for by the re-capitalization of the Winnipeg Electric Company; transit facilities of that Company were transferred to the Greater Winnipeg Transit Company.

In 1955, electric cars travelled 55,650,898 miles in passenger service, trackless trolley buses operated by electric railway companies travelled 37,975,614 miles and motor buses 74,831,056 miles. Although most of the urban centres in which transit services operate have greatly extended their populated areas in the postwar years, the number of fare passengers carried has declined each year since 1946.

22.—Traffic Statistics of Electric Railways 1946-55

NOTE.—Figures for 1901-45 are given in the corresponding table of previous Year Books beginning with the 1933 edition.

Year	Miles of Road		Electric Car and Bus Mileage			Fare Passengers Carried ¹	Freight Carried ¹
	Total	With Double Track	Passenger	Other	Total		
	miles	miles	miles	miles	miles	No.	tons
1946.....	1,004.44	485.06	177,256,084	2,822,300	180,078,384	1,344,916,773	3,506,805
1947.....	895.25	436.95	180,204,812	2,808,252	183,013,064	1,323,723,782	3,655,278
1948.....	778.92	391.78	182,943,709	3,038,989	185,982,698	1,309,565,795	4,050,111
1949.....	719.31	356.61	173,849,096	3,048,146	176,897,242	1,240,558,812	3,702,016
1950.....	662.96	326.90	173,285,475	3,562,144	176,847,619	1,192,058,052	4,115,974
1951.....	595.38	293.87	167,316,921	3,646,069	170,962,990	1,133,393,935	4,479,404
1952.....	567.79	272.02	166,432,237	3,759,193	170,191,430	1,109,299,866	4,079,474
1953.....	552.49	261.81	164,871,341	3,593,002	168,464,343	1,076,979,055	3,968,742
1954.....	531.91	239.75	170,284,356	3,308,732	173,593,088	1,063,705,752	3,527,495
1955.....	509.19	220.26	168,457,568	4,026,233	172,483,801	1,025,314,237	4,079,549

¹ Includes passengers and freight carried on buses and trackless trolley buses operated by electric railways.

23.—Passengers, Employees and Others Killed or Injured on Electric Railways 1946-55

NOTE.—Figures for 1900-45 are given in the corresponding table of previous Year Books beginning with the 1926 edition.

Year	Passengers		Employees		Others		Totals	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
	No.	No.	No.	No.	No.	No.	No.	No.
1946.....	8	4,009	3	904	66	1,584	77	6,497
1947.....	2	4,181	4	910	71	1,469	77	6,560
1948.....	2	3,792	5	1,336	74	1,328	81	6,456
1949.....	1	3,688	1	766	63	1,239	65	5,693
1950.....	—	3,718	1	730	44	1,204	45	5,652
1951.....	—	3,392	2	650	42	998	44	5,040
1952.....	2	3,551	1	655	40	1,046	43	5,252
1953.....	—	3,322	2	650	31	941	33	4,913
1954.....	1	3,190	—	702	41	856	42	4,748
1955.....	4	3,220	2	631	19	803	25	4,654

The Toronto Subway.—Construction of Canada's first subway commenced at Toronto in 1949 and the line was put into operation in March 1954. The route of the subway follows the general line of Yonge Street, a distance of about 4.5 miles from Front Street to Eglinton Avenue. Twelve stations are located along the line and a pedestrian tunnel links the Union Station and the Royal York Hotel with the subway. Subsurface sections of the subway are from six to 20 feet underground. Rapid-transit cars, 104 in number, each of 62-passenger capacity, are used. The 500-foot platforms at all stations accommodate trains of up to eight cars in length and a peak load of 40,000 passengers an hour in each direction may be handled.

PART III.—ROAD TRANSPORT*

Highways and motor vehicles are herein treated as related features of transportation. An introductory section summarizes provincial regulations regarding motor vehicles and motor traffic.

Section 1.—Provincial Motor Vehicle and Traffic Regulations†

NOTE.—It is obviously impossible to include here the great mass of detailed regulations in force in each province and territory; only the more important general information is given. The sources of information for detailed regulations for specific provinces and territories are given at pp. 832-833.

The registration of motor vehicles and the regulation of motor vehicle traffic lies within the legislative jurisdiction of the provincial and territorial governments. Regulations common to all provinces and territories are summarized under the following headings.

Operators' Licences.—The operator of a motor vehicle must be over a specified age, usually 16 years (17 in Newfoundland and Quebec, and 18 in Alberta), and must carry a licence, obtainable in most provinces only after prescribed qualification tests and renewable annually, except in Alberta and British Columbia where they are renewable every five years. Special licences are required for chauffeurs in all provinces except Newfoundland and in some jurisdictions special licences may be granted to those who have not reached the specified age.

Motor Vehicle Regulations.—In general, all motor vehicles and trailers must be registered annually, with the payment of specified fees, and must carry two registration plates, one on the front and one on the back of the vehicle (one only for the back of trailers). In most provinces in event of sale the registration plates stay with the car but in Manitoba and Saskatchewan the plates are retained by the owner. A change of ownership of the vehicle must be recorded with the registration authority. However, exception from registration is granted for a specified period (usually at least 90 days except in Quebec where the maximum is 90 days and British Columbia where it is six months) in any year to visitors' private vehicles registered in another Province or a State that grants reciprocal treatment. Regulations require a safe standard of efficiency in the mechanism of the vehicle and of its brakes and stipulate that equipment include non-glare headlights, a proper rear light, a satisfactory locking device, a muffler, a windshield wiper and a rear-vision mirror.

Traffic Regulations.—In all provinces and territories, vehicles keep to the right-hand side of the road. Everywhere motorists are required to observe traffic signs, lights, etc., placed at strategic points on highways and roads. The speed limit in most provinces is 50 miles an hour except in Quebec where it is 60, in Manitoba and Alberta where it is 60 in daytime and 50 at night, and in Nova Scotia where the limit is a "reasonable and prudent" speed (of about 40). Slower speeds are always required in cities, towns and villages, when passing schools and public playgrounds, at road intersections, railway crossings, or at other places or times where the view of the highway for a safe distance ahead is in any way obscured. In almost all provinces truck speed limits are at least five miles an hour below automobile speed limits. Motor vehicles must not pass a street car that has stopped to take on or discharge passengers except where safety zones are provided. In most provinces accidents resulting in personal injury or property damage of \$100 or more must be reported to a provincial or municipal police officer and a driver involved must not leave the scene of an accident until he has rendered all possible aid and disclosed his name to the injured party.

* Except as otherwise indicated, the material in this Part has been revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

† The information in this Section has been revised from material provided by the officials in charge of the administration of motor vehicle and traffic Acts and Regulations in the individual provinces and territories.

Penalties.—Penalties ascend in scale from small fines for minor infractions of any of the regulations to suspension of the operator's driving permit, impounding of the car, or imprisonment for serious infractions, recklessness, driving without an operator's licence, and especially for attempting to operate a motor vehicle while intoxicated.

Safety Responsibility Legislation.—Each province of Canada has enacted legislation under this heading (sometimes referred to as financial responsibility legislation). In general, these laws provide for the automatic suspension of the driver's licence and motor vehicle permit of a person convicted of an offence arising out of a motor vehicle accident, or a person involved directly or indirectly in an accident who is not covered for third-party insurance at the time of the accident. The suspension remains effective until any penalty or judgment has been satisfied and proof of financial responsibility for the future is filed.

Although safety responsibility legislation has not been enacted in either the Yukon Territory or the Northwest Territories, the Motor Vehicle Ordinances of the two Territories require the owner of a motor vehicle to submit evidence of stipulated insurance coverage on such vehicle before he can obtain registration.

Unsatisfied Judgment Funds.—In recent years a new type of motor vehicle legislation has been enacted in all provinces except Quebec and Saskatchewan. This has usually taken the form of an amendment to the motor vehicle laws of the province and provides for the establishment of an Unsatisfied Judgment Fund, out of which are paid judgments awarded for damages arising out of motor vehicle accidents in the province which cannot be collected in the ordinary process of law. The Fund is created by the collection annually of an Unsatisfied Judgment Fund fee from the registered owner of every motor vehicle or from every person to whom a driver's licence is issued, except in British Columbia where the Fund is maintained by insurance companies. This fee does not exceed \$1 per annum except that, in 1958, Ontario will collect \$5 from each uninsured owner of a motor vehicle at the time of registration. A feature of this legislation which is contained in some provincial statutes provides for the payment of judgments in the so-called 'hit-and-run' accidents. When these occur, if neither the owner nor the driver can be identified, action may be taken against the Registrar of Motor Vehicles; any judgment secured against the Registrar is paid out of the Fund. All of these laws contain a provision limiting the amount that can be paid out of the Fund on one judgment. In Ontario, Alberta and British Columbia the limits are \$10,000 for one person, \$20,000 for two or more persons injured in one accident and \$2,000 for property damage. In Manitoba the legal limits are \$10,000, \$20,000 and \$1,000 respectively, while other provinces retain lower limits of \$5,000, \$10,000 and \$1,000. For hit-and-run accidents payments are made for personal injuries or death only.

Sources of information for provincial motor vehicle and traffic regulations:—

Newfoundland

Administration.—Deputy Minister of Public Works, St. John's.

Legislation.—The Highway Traffic Act 1951, as amended.

Prince Edward Island

Administration.—The Provincial Secretary, Charlottetown.

Legislation.—The Highway Traffic Act (R.S.P.E.I. 1951, c. 73).

Nova Scotia

Administration.—Motor Vehicle Branch, Department of Highways, Halifax.

Legislation.—The Motor Vehicle Act (1954, c. 184) as amended, and the Motor Carrier Act (R.S.N.S. 1923, c. 78) as amended.

New Brunswick

Administration.—Motor Vehicle Division, Provincial Tax Branch, Department of Provincial Secretary-Treasurer, Fredericton.

Legislation.—The Motor Vehicle Act (R.S.N.B. 1955) as amended.

Quebec

Administration.—Motor Vehicle Service, Provincial Revenue Offices, Parliament Bldgs., Quebec.

Legislation.—The Motor Vehicles Act (R.S.Q. 1941, c. 142) as amended.

Ontario

Administration.—Motor Vehicles Branch, Department of Transport, Toronto.

Legislation.—The Highway Traffic Act (R.S.O. 1950, c. 167), the Public Vehicles Act (R.S.O. 1950, c. 322) and the Public Commercial Vehicles Act (R.S.O. 1950, c. 304).

Manitoba

Administration.—Minister of Public Utilities, Winnipeg.

Legislation.—The Highway Traffic Act (R.S.M. 1954, c. 112) as amended.

Saskatchewan

Administration.—Treasury Department, Highway Traffic Board, Revenue Building, Regina.

Legislation.—The Vehicles Act, 1957.

Alberta

Administration.—Motor Vehicle Branch, Department of Highways, Edmonton.

Legislation.—The Vehicles and Highway Traffic Act (R.S.A. 1955, c. 356) as amended, The Motor Vehicles Accident Indemnity Act (R.S.A. 1955, c. 209) as amended, the Public Service Vehicles Act (R.S.A. 1955, c. 265), and Rules and Regulations.

British Columbia

Administration and Legislation.—Enforcement of the Motor Vehicle Act, the Highway Act and the Motor Carrier Act is vested in the Royal Canadian Mounted Police and the various municipal police forces. The Highway Act is administered by the Minister of Public Works, the Motor Carrier Act by the Public Utilities Commission, and the Motor Vehicle Act by the Superintendent of Motor Vehicles, Victoria, B.C.

Yukon Territory

Administration.—Commissioner of the Yukon Territory, Whitehorse, Y.T. Information regarding regulations may also be obtained from the Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, Ottawa.

Legislation.—The Motor Vehicle Ordinance (1952, First Session, c. 8) as amended.

Northwest Territories

Administration.—Commissioner of the Northwest Territories. Address communications to the Director, Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, Ottawa.

Legislation.—The Motor Vehicles Ordinance (1956, c. 72) as amended.

Section 2.—Highways and Roads

The populated sections of Canada are well supplied with highways and roads. Access to outlying settlements is provided to some extent by roads built by logging, pulp and paper, and mining companies, although these are not generally available for public travel. At the same time, great areas of Newfoundland, Quebec, Ontario, the Prairie Provinces, British Columbia and the Territories are very sparsely settled and are virtually without roads of any kind.

At the end of 1955, the total mileage of highway and rural roads in Canada was 455,404. This mileage includes all roads under provincial jurisdiction, federal roads including those in the National Parks and the Yukon and Northwest Territories, and local roads under municipal jurisdiction other than the mileages in cities and towns. The latter are given separately under the heading "Urban Roads", p. 836.

The 1955 figures shown in Table 1 are not strictly comparable with those for the previous year. Reclassification of roads in Manitoba resulted in a considerable decrease in gravelled and earth mileages. All other provinces except New Brunswick reported increases during the year. Federal roads in the ten provinces, including those in National Parks, the Federal District Commission driveways around Ottawa, and the 729-mile North West Highway System of British Columbia, measured 1,912 miles. The roads in the Yukon Territory were classed as provincial roads for the first time in 1955.

1.—Milage of each Type of Road by Province 1955

NOTE.—The figures for Canada are the sums of the milages so reported. Urban streets are not included.

Classification	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles
Surfaced Road—												
Portland cement concrete.....	—	6	7	—	258	856	108	—	1	32	—	1,268
Bituminous pavement.....	33	—	45	1,372	7,565	5,935	—	—	—	2,221	4	17,175
Bituminous surface.....	97	367	1,808	923	1,172	4,724	1,701	1,524	2,323	1,082	—	15,721
Gravel and crushed stone...	2,140	1,412	7,447	10,529	22,441	52,858	2,997	24,389	30,148	9,933	1,630	165,926
Non-surfaced Road—												
Improved earth.....	460	1,411	2,922 3,029	220	11,941	10,250	15,593 ¹ 17	43,163 97,411	26,767 26,883	9,159 1,519	415 214	255,314
Other earth roads	3,940											
Totals.....	6,670	3,196	15,258	13,044	43,377	74,623	20,416	166,487	86,122	23,948	2,263	455,404

¹ Includes milages of gravelled roads; details not available.

Expenditures on roads and highways reached a new high in the year ended Mar. 31, 1956, at \$513,852,270. This figure was nearly 20 p.c. higher than the expenditure in the previous fiscal year. Construction work was up 28 p.c. and maintenance 5 p.c. Table 2 shows the expenditures by provinces and the federal-provincial-municipal distribution for the fiscal years ended 1952-56.

2.—Construction, Maintenance and General Expenditure on Rural Roads, Bridges and Ferries by Province, Years Ended Mar. 31, 1952-56

Item and Province or Territory	1952	1953	1954	1955	1956 ^p
	\$	\$	\$	\$	\$
Construction¹.....	192,810,362	244,614,842	234,334,349	229,087,011	294,343,957
Newfoundland.....	4,555,303	2,954,526	4,240,406	7,921,808	8,990,495
Prince Edward Island.....	2,130,750	2,221,375	1,788,675	2,795,081	2,911,560
Nova Scotia.....	9,267,598	5,744,539	7,584,863	6,190,534	8,615,147
New Brunswick.....	6,039,885	6,376,795	6,983,831	6,867,169	11,042,564
Quebec.....	56,995,225	73,769,845	57,945,075	58,153,492	76,403,786
Ontario.....	55,768,891	69,779,100	64,807,939	56,762,275	85,171,965
Manitoba.....	9,347,887	11,627,268	12,162,353	12,389,735	12,474,617
Saskatchewan.....	9,065,930	13,325,620	13,860,596	13,390,784	12,682,869
Alberta.....	21,301,524	34,211,782	40,105,154	40,240,306	39,800,420
British Columbia.....	16,298,760	23,170,263	23,433,190	22,128,045	33,283,542
Yukon and N.W.T.....	595,600	508,149	739,744	1,010,545	1,850,116
Maintenance.....	127,790,354	147,719,040	149,844,221	178,832,011	187,134,927
Newfoundland.....	1,646,977	1,893,130	2,267,335	2,696,832	2,932,427
Prince Edward Island.....	1,001,335	1,077,210	1,219,612	1,159,173	1,588,903
Nova Scotia.....	6,880,574	8,202,264	9,563,259	10,376,255	11,580,407
New Brunswick.....	7,083,580	8,618,951	8,235,747	10,281,339	10,855,460
Quebec.....	25,735,365	30,628,015	31,184,047	35,195,468	35,131,875
Ontario.....	49,547,029	58,105,684	52,667,538	57,464,175	60,591,398
Manitoba.....	2,097,872	2,251,555	2,648,689	3,314,421	3,642,016
Saskatchewan.....	3,857,513	4,503,343	4,939,826	15,517,577	17,159,558
Alberta.....	14,390,843	15,184,161	18,487,280	22,744,792	22,610,892
British Columbia.....	12,498,943	15,192,109	14,558,602	15,493,701	17,137,302
Yukon and N.W.T.....	3,050,323	2,062,618	4,072,286	4,588,278	3,904,689
Administration and General².....	13,983,546	11,957,529	12,889,589	21,552,986	31,763,089
Newfoundland.....	233,871	230,943	279,402	347,610	397,452
Prince Edward Island.....	68,988	69,432	73,115	73,268	81,709
Nova Scotia.....	692,893	968,344	792,148	798,905	960,176
New Brunswick.....	242,682	276,312	307,994	416,716	498,305
Quebec.....	2,436,853	2,602,009	2,727,669	3,383,708	3,423,412
Ontario.....	4,583,869	4,636,933	5,027,809	10,958,835	21,135,457

For footnotes, see end of table.

2.—Construction, Maintenance and General Expenditure on Rural Roads, Bridges and Ferries by Province, Years Ended Mar. 31, 1952-56—concluded

Item and Province or Territory	1952	1953	1954	1955	1956 ^p
	\$	\$	\$	\$	\$
Administration and General ² —concl.					
Manitoba.....	685,479	738,036	787,645	801,103	965,426
Saskatchewan.....	282,334	384,262	433,990	1,251,078	1,505,549
Alberta.....	89,287 ³	86,649 ³	75,647 ³	1,259,707	786,560
British Columbia.....	4,353,599	1,654,696	1,971,234	1,805,578	1,506,041
Yukon and N.W.T.....	31,039	11,693	13,102	25,476	39,402
Totals.....	334,584,262	404,291,421	397,068,159	429,472,008	513,852,270
Distribution of All Expenditure—					
Federal.....	21,667,085	25,034,650	26,759,571	32,775,800	36,644,143
Provincial.....	287,934,225	350,248,566	341,501,941	355,454,863	435,583,891
Municipal.....	23,288,598	27,721,288	27,505,913	37,173,083	40,213,328
Other.....	1,694,354	1,286,917	1,300,734	4,068,262	1,110,908

¹ Includes payments from railways and contributions from the Railway Grade Crossing Fund toward elimination of grade crossings, etc., amounting to \$1,443,009 in 1951-52, \$925,580 in 1952-53, \$712,523 in 1953-54, \$1,237,237 in 1954-55 and \$1,116,876 in 1955-56.

² Includes federal administrative costs *re* Trans-Canada Highway amounting to \$282,652 in 1951-52, \$298,230 in 1952-53, \$399,834 in 1953-54, \$431,002 in 1954-55 and \$462,600 in 1955-56.

³ Federal administrative costs only.

The Trans-Canada Highway System.—The original federal-provincial agreement of 1949 for construction of the Trans-Canada Highway was given in outline, together with other data on specifications and proposed route across the participating provinces, in the 1951 Year Book, pp. 631-634. The original Act set the standards to be met: a hard-surfaced, two-lane highway, 22 to 24 feet wide with ample shoulder widths, bridge clearances and sight distances, low gradients and curvature, a maximum load capacity of nine tons for one axle, and the elimination, wherever possible, of railway grade crossings. The shortest practicable east-west route was to be designated by each province within its own borders, in agreement on terminal points with adjoining provinces. Those sections within the National Parks were to be the responsibility of the Federal Government.

Certain amendments to financial provisions and completion date were discussed at the Federal-Provincial Conference held at Ottawa in November 1955, and the Trans-Canada Highway Act was amended by Parliament in June 1956. The new Act gives authority for increasing federal expenditure from \$150,000,000 to \$250,000,000 under a formula by which the Federal Government will pay 90 p.c. of the cost of building 10 p.c. of the mileage of the Trans-Canada Highway in each province in an effort to close gaps where no road at all exists or where certain portions are below standard. The basic 50-50 financial arrangement is still in force on the remaining 90 p.c. of the mileage in each province. A revised completion date is set at Dec. 31, 1960. New federal-provincial agreements were entered into by the participating provinces during the six months following passage of the amendments.

The Provincial Government of Quebec is not a party to a federal-provincial agreement but there is a paved highway across that Province, linking the two ends of the Trans-Canada Highway route in Ontario and New Brunswick.

In the nine participating provinces the route as amended in 1956 will total 4,444 miles divided as follows: Newfoundland 554; Prince Edward Island 71; Nova Scotia 311; New Brunswick 390; Ontario 1,436; Manitoba 309; Saskatchewan 406; Alberta 282; British Columbia 568; and in the National Parks 117. Revisions in location have since altered some mileage totals. For instance, the mileage through Mount Revelstoke and Glacier National Parks in British Columbia was shortened by a decision to use the Rogers Pass route, and the decision on the location of Terra Nova, the new National Park in Newfoundland, increased the mileage for which the Federal Government is solely responsible by 63 miles. Thus the National Park mileage is altered to 143. The sum of \$10,000,000 was allocated by Parliament for construction of the Highway through the National Parks during the fiscal year ended Mar. 31, 1958.

Contractual commitments of the nine participating provinces for new construction on the Highway during the period Dec. 9, 1949, to July 15, 1957, amounted to \$345,625,243 of which the Federal Government's share, including the additional 40 p.c. under the amended Act, was \$189,317,814. Federal payments to the provinces during this period for prior, interim and new construction totalled \$109,431,701. On-site labour expended on the Highway up to Mar. 31, 1957, amounted to 5,196,607 eight-hour man-days of employment; off-site employment required for the provision of necessary material and services was estimated at 8,834,232 man-days.

In Saskatchewan, work was completed over the whole route of 406 miles, and the Highway opened and dedicated at a ceremony on Aug. 21, 1957. In provinces more handicapped by problems of terrain and construction, progress continues to be made and the work is well up to schedule. At May 31, 1957, contracts for 2,488 miles of grading had been approved and the equivalent of 2,154 miles built, contracts for base-course had been approved for 2,131 miles and the equivalent of 1,761 miles completed; paving to specified standard had been completed over a distance of 1,559 miles; 261 bridges, overpasses and other structures of over 20-foot span had been completed.

Urban Roads.*—Information on urban roads is obtained from municipalities with populations of over 1,000. The number of such cities and towns reporting in 1956 was well over twice the number reporting in 1954 (317) and the data secured was much more comprehensive.

3.—Statistics of Urban Roads, Years Ended Mar. 31, 1955 and 1956

Item		1955	1956
Municipalities Reporting	No.	794	799
Total Expenditure Reported	\$	87,999,902	106,117,610
New construction.....	\$	36,423,626	45,543,596
Reconstruction, repair, cleaning, sanding and snow removal.....	\$	51,486,276	60,574,014
Total Urban Mileage	No.	22,027	22,823
Rigid paving.....	"	5,796	6,049
Flexible pavement.....	"	3,347	3,239
Untreated gravel or earth.....	"	12,884	13,535

Section 3.—Motor Vehicles

Registration.—Automobiles were registered in Canada for the first time in 1904. Ontario was the only province to issue licences in that year. New Brunswick began registering cars in 1905; Quebec, Saskatchewan and Alberta in 1906; British Columbia in 1907; Manitoba in 1908; Nova Scotia in 1909; Prince Edward Island in 1913; and Yukon Territory in 1914.

In 1905 only 565 motor vehicles were registered in Canada but by 1915 the number had risen to 95,284 and by the end of the next decade to 724,048. With the exception of 1931-33 an annual increase was in evidence until 1941 when 1,572,784 motor vehicles were registered. The number of commercial vehicles continued to increase during the war years but a considerable decline was shown in passenger cars because of the restrictions on manufacture and the rationing of tires and gasoline. However postwar recovery was rapid and registrations have risen steadily to a 1956 total of 4,230,647, including 3,187,099 passenger cars and taxis, 995,723 trucks and miscellaneous vehicles, 12,245 buses and 35,580 motorcycles.

* Statistics are given in more detail in DBS annual report *Highway Statistics*.

4.—Motor Vehicles Registered by Province 1947-56

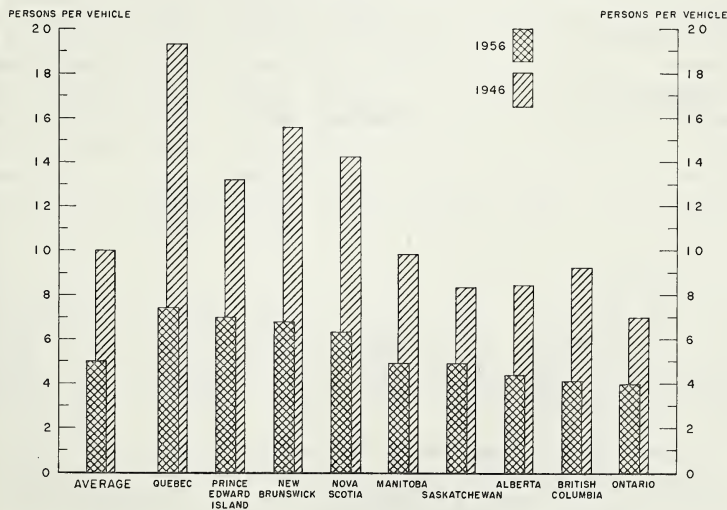
NOTE.—Registrations given here include passenger cars, trucks, buses, motorcycles, service cars, etc., but not trailers or dealer licences. Figures for 1904-35 are given in the 1937 Year Book, p. 668; for 1936-44 in the 1948-49 edition, p. 707; and for 1945-46 in the 1956 edition, p. 814.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total ¹
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1947.....	...	9,948	70,300	51,589	296,547	800,058	112,149	158,512	155,386	179,684	1,835,959
1948.....	...	11,290	76,319	62,366	335,953	874,933	128,000	167,515	173,950	202,126	2,034,943
1949.....	13,981	13,211	83,443	67,280	384,733	970,137	139,836	185,027	200,428	230,008	2,290,628
1950.....	16,375	15,383	94,743	74,415	433,701	1,104,080	157,788	199,866	230,624	270,312	2,600,511
1951.....	20,058	16,896	105,262	83,023	500,729	1,205,098	171,265	215,450	259,841	291,417	2,872,420
1952.....	23,630	18,717	114,982	89,839	574,974	1,291,753	187,881	237,014	291,469	321,482	3,155,997
1953.....	29,576	20,286	129,564	93,914	617,855	1,406,119	203,652	257,504	318,812	348,830	3,430,672
1954.....	34,423	20,848	133,087	99,058	674,114	1,489,980	210,471	267,373	338,541	371,711	3,644,589
1955.....	39,766	22,145	149,841	106,648	743,682	1,617,853	222,474	274,950	356,839	409,343	3,948,652
1956 ²	45,768	20,779	151,764	110,963	824,908	1,710,240	238,021	291,053	381,153	450,547	4,230,647

¹ Includes registrations in the Yukon and Northwest Territories.

² Registered farm tractors were excluded for the first time in 1956 resulting in smaller increases and even a decrease in Prince Edward Island as compared with 1955.

PERSONS PER PRIVATE AUTOMOBILE BY PROVINCE 1946 AND 1956



5.—Types of Motor Vehicles Registered by Province 1955 and 1956

Year and Province or Territory	Passenger Cars ¹	Commercial Cars, Trucks, etc. ^{2,3}	Buses	Motor-cycles	Total
	No.	No.	No.	No.	No.
1955					
Newfoundland.....	27,474	11,851	155	286	39,766
Prince Edward Island.....	13,436	8,566	10	133	22,145
Nova Scotia.....	106,763	41,945	4	1,133	149,841
New Brunswick.....	74,602	30,639	445	962	106,648
Quebec.....	549,129	177,686	2,912	13,955	743,682
Ontario.....	1,292,133	309,294	4,105	12,321	1,617,853
Manitoba.....	162,362	58,549	201	1,362	222,474
Saskatchewan.....	166,864	107,281	128	677	274,950
Alberta.....	236,395	116,078	2,717	1,649	356,839
British Columbia.....	303,481	102,097	4	3,765	409,343
Yukon and N.W.T.....	2,778	2,302	21	10	5,111
Canada, 1955.....	2,935,417	966,288	10,694	36,253	3,948,652
1956					
Newfoundland.....	32,555	12,758	157	298	45,768
Prince Edward Island.....	14,163	6,457	11	148	20,779
Nova Scotia.....	111,141	38,695	756	1,172	151,764
New Brunswick.....	81,390	28,194	472	907	110,963
Quebec.....	627,993	180,217	3,284	13,414	824,908
Ontario.....	1,365,874	328,434	4,280	11,652	1,710,240
Manitoba.....	173,035	63,040	199	1,747	238,021
Saskatchewan.....	179,986	110,291	125	651	291,053
Alberta.....	256,177	120,190	2,937	1,849	381,153
British Columbia.....	341,650	105,173	4	3,724	450,547
Yukon and N.W.T.....	3,135	2,274	24	18	5,451
Canada, 1956.....	3,187,099	995,723	12,245	35,580	4,230,647

¹ Includes taxis. ² Includes service cars, tractors, etc.

³ Registered farm tractors were excluded

in 1956. ⁴ Included with trucks.

Apparent Supply of Automobiles.—The apparent supply of automobiles in Canada in any year is computed by deducting the number exported from the sum of the production and imports. Statistics regarding retail sales and the financing of motor vehicle sales in Canada are given in Chapter XXI on Domestic Trade.

6.—Apparent Supply of New Automobiles 1947-56

Year	Cars Made for Sale in Canada ¹		Car Imports		Re-exports of Imported Cars		Apparent Supply	
	Pas-senger	Com-mercial ²	Pas-senger	Com-mercial	Pas-senger	Com-mercial	Pas-senger	Com-mercial ²
	No.	No.	No.	No.	No.	No.	No.	No.
1947.....	128,243	63,152	35,570	7,293	26	4	163,787	70,441
1948.....	135,316	73,582	17,037	3,575	17	4	152,336	77,153
1949.....	177,060	85,715	35,293	3,404	32	8	212,321	89,111
1950.....	259,481	96,826	81,722	6,806	62	20	341,141	103,612
1951.....	243,155	105,547	42,631	5,703	2,866	11	282,920	111,239
1952.....	245,443	112,485	35,665	4,328	999	11	280,109	116,802
1953.....	319,937	100,772	53,179	5,296	44	3	373,072	106,065
1954.....	267,452	59,666	38,509	4,973	84	25	305,877	64,614
1955.....	349,306	69,186	48,546	9,403	22	24	397,830	78,565
1956.....	349,809	85,094	76,200	13,032	45	42	425,964	98,084

¹ Factory shipments since 1952.² Includes Armed Forces vehicles.

Provincial Government Revenue from Motor Vehicles.—The taxation of motor vehicles, garages, drivers, chauffeurs, etc., is an important source of provincial government income. In every province licences or permits duly issued by the provincial authorities are required for motor vehicles of all kinds, trailers, operators or drivers, paid chauffeurs, dealers, garages and gasoline and service stations. In 1956 the average cost per motor vehicle for operating taxes and licences was about \$90. Lower gasoline tax rates in the five provinces from Ontario westward brought the averages for those provinces below the national average. Present gasoline tax rates range from nine cents per gallon in Manitoba to 17 cents in Newfoundland and Nova Scotia.

The more important sources from which provincial revenue from motor vehicles is derived are shown in Table 7. Federal Government revenue from import duties, excise and sales taxes are given in Chapter XXIV on Public Finance.

7.—Provincial Revenue from the Registration and Operation of Motor Vehicles, Year Ended Mar. 31, 1956

Province or Territory	Passenger Automobile Licences	Truck, Bus, Trailer and other Vehicle Licences	Motorecycle Licences	Chauffeur, Driver and Dealer Licences	Public Service Vehicle Tax	Gasoline Tax	Total ¹
	\$	\$	\$	\$	\$	\$	\$
Newfoundland.....	477,112	558,116	2,737	146,992	²	3,362,266	4,687,986
Prince Edward Island..	230,806	232,811	497	33,050	3,734	1,372,384	1,882,489
Nova Scotia.....	1,934,429	1,902,449	³	326,013	41,928	12,381,334	16,829,419
New Brunswick.....	1,494,386	1,831,295	5,587	254,737	³	9,922,358	13,635,159
Quebec.....	12,699,671	11,608,469	53,029	2,337,690	823,322	67,970,367	96,191,574
Ontario.....	17,681,927	18,614,365	27,392	2,281,316	1,915,219	103,789,054	145,884,660
Manitoba.....	2,509,040	1,526,322	7,149	611,604	541,138	9,315,394	14,727,381
Saskatchewan.....	2,351,016	2,429,149	3,489	392,484	217,526	14,662,983	20,522,501
Alberta.....	3,351,573	5,697,753	⁴	558,145	164,830	20,256,251	30,517,983
British Columbia.....	5,926,930	3,672,604	16,520	969,996	463,529	21,118,484	32,664,870
Yukon and N.W.T.....	35,754	36,439	28	17,824	30,330	256,942	383,279
Totals.....	48,692,644	48,109,772	116,428	7,929,851	4,201,556	264,407,817	377,927,301

¹ Includes other items not shown such as transfer of motor vehicles, garage and service station licences, and fines for infractions of motor vehicle laws. ² Included with trucks. ³ Included with other motor vehicles.

⁴ Included with passenger automobiles.

Sales of Gasoline.—'Gasoline', under the provincial Acts, is considered to include all petroleum oils used as fuel in internal combustion engines, as well as propane gas used in motor buses.

8.—Sales of Gasoline by Province 1952-56

Province or Territory	1952	1953	1954	1955	1956
	gal.	gal.	gal.	gal.	gal.
Newfoundland.....	13,820,200	16,504,200	18,818,942	21,534,679	24,242,239
Prince Edward Island.....	10,832,264	12,388,599	12,782,733	13,751,121	14,325,068
Nova Scotia.....	69,174,476	75,772,354	80,518,367	86,499,272	91,133,927
New Brunswick.....	67,361,022	77,108,360	78,065,848	75,076,615	81,177,965
Quebec.....	430,671,283	456,460,906	484,868,758	545,070,050	611,828,946
Ontario.....	844,162,648	928,515,728	991,397,120	1,099,962,376	1,198,568,793
Manitoba.....	148,274,072	159,554,101	162,578,296	188,284,222	200,314,027
Saskatchewan.....	238,663,980	250,698,689	244,370,743	262,201,711	269,661,903
Alberta.....	329,255,018	361,665,017	388,929,549	353,924,513	383,609,186
British Columbia.....	191,444,793	210,028,255	235,670,948	256,166,048	298,957,204
Yukon.....	..	..	..	..	4,245,811
Totals, Gross Sales.....	2,343,659,756	2,548,696,209	2,698,001,304	2,902,470,607	3,178,065,069
Refunds and exemptions.....	625,547,937	646,181,392	677,096,843	675,490,362	721,076,713
Totals, Net Sales.....	1,718,111,819	1,902,514,817	2,020,904,461	2,226,980,245	2,456,988,356

Motor Carriers.*—Statistics of the 'for hire' segment of the motor carrier industry have been collected since 1941. The continued co-operation of provincial authorities, trucking associations and other interested parties has resulted in gradual improvement in the statistical accuracy of these data but much still remains to be done. As little capital is required to enter the trucking business, many marginal operators are associated with the industry, and the large turnover and numerous changes of operators each year creates many problems in the collection of statistics. The 2,938 firms from which usable returns were secured in 1955 reported gross revenue of \$283,513,579 compared with 2,784 firms reporting \$247,699,065 revenue in 1954.

The motor carrier industry is divided into freight and passenger sections, each of which is subdivided into two groups according to gross annual revenue: (1) those having annual revenues of \$20,000 or over; (2) those having revenues under \$20,000. In the passenger carrier section, all city passenger carriers are included under "City Service" while intercity and rural passenger operators are divided into the two revenue groups.

These statistics do not include motor bus operations of street railways except where such services are entirely motorized. Motor bus data for street railways are included under electric railway systems (*see* p. 829). Excluded are operations of vehicle fleets owned and

* Statistics are given in more detail in DBS annual report *Motor Carriers, Freight-Passenger*.

operated by private companies where the vehicles are not available for public service, such as dairies, bakeries, departmental and grocery stores, oil and gasoline distributors and breweries. Operators under almost exclusive contract, such as those engaged in the collection of milk or co-operatively owned vehicles, are also excluded, as are school buses owned and operated by school boards or municipalities or under contract.

9.—Summary Statistics of Freight and Passenger Motor Carriers 1952-55

Item		1952	1953	1954	1955
Carriers Reporting	No.	4,040	3,483	2,784	2,938
Passenger.....	"	425	419	373	257
Freight.....	"	3,615	3,064	2,411	2,681
Investments—land, buildings, equipment, etc. \$		177,112,456	202,362,522	196,417,419	220,195,640
Revenue	\$	233,973,179	261,422,465	247,699,065	283,513,579
Freight.....	\$	155,364,477	181,985,420	178,405,949	213,211,233
Passenger—intercity and rural.....	\$	49,922,877	49,465,440	40,655,002	42,934,180
city.....	\$	20,483,925	22,470,589	18,206,055	16,425,701
Miscellaneous.....	\$	8,201,900	7,501,016	10,432,059	10,942,465
Operating Expenses	\$	215,111,719	242,239,838	233,579,561	263,698,912
Maintenance.....	\$	45,130,418	45,228,846	43,996,550	50,221,446
Wages and bonuses of drivers and helpers.....	\$	54,709,002	62,896,153	58,666,479	67,317,160
Other transportation expenses.....	\$	32,556,087	33,695,077	32,579,920	37,547,254
Operating taxes and licences.....	\$	14,905,120	17,140,078	17,270,469	19,822,395
Other operating expenses.....	\$	67,811,092	83,279,684	81,066,143	88,790,657
Net Operating Revenue	\$	18,861,460	19,182,627	14,119,504	19,814,667
Traffic and Employees—					
Passengers—					
Regular routes—					
Intercity and rural.....	No.	99,465,124	86,953,101	76,075,815	74,686,852
City.....	"	235,573,603	244,746,354	191,479,770	167,105,841
Special and chartered service—					
Intercity and rural.....	"	4,704,306	4,329,785	5,292,924	5,366,413
City.....	"	356,945	153,932	306,867	426,928
Bus miles—					
Regular routes—					
Intercity and rural.....	No.	110,158,784	111,862,184	100,899,431	95,800,035
City.....	"	42,001,905	44,688,077	39,237,723	33,002,182
Special and chartered service—					
Intercity and rural.....	"	4,541,013	4,594,072	5,305,331	5,604,666
City.....	"	171,502	428,437	371,368	356,131
Freight carried—intercity and rural ¹	ton	19,095,669	22,494,110	26,844,775	24,056,326
Gasoline consumed.....	gal.	77,770,299	85,601,862	78,250,806	80,274,800
Diesel oil consumed.....	gal.	4,348,051	7,460,331	11,917,950	14,180,777
Working proprietors.....	No.	3,835	3,195	2,404	2,609
Allowances of working proprietors.....	\$	8,641,403	8,161,206	5,844,546	3,093,937
Employees—					
July 15.....	No.	31,417	32,888	29,706	31,964
December 15.....	"	30,866	31,814	29,010	31,568
Total salaries and wages.....	\$	84,919,511	95,112,580	93,314,372	105,095,549
Equipment—					
Trucks.....	No.	11,649	10,876	8,564	8,932
Tractors.....	"	4,791	6,108	6,351	7,350
Trailers and semi-trailers.....	"	8,613	9,826	8,945	10,336
Buses.....	"	4,683	4,725	4,298	3,745

¹ Incomplete coverage.

10.—Statistics of Freight and Passenger Motor Carriers classified by Revenue Group 1954 and 1955

Item	Freight Carriers		Passenger Carriers		
	Annual Revenue of \$20,000 or Over	Annual Revenue of Under \$20,000	City Service	Intercity Annual Revenue of \$20,000 or Over	Rural Annual Revenue of Under \$20,000
1954					
Carriers Reporting..... No.	848	1,563	75	121	174
Cost of Land, Buildings, Equipment, etc. \$	106,528,652	9,908,908	20,204,681	57,910,578	1,861,600
Revenue..... \$	170,066,834	11,467,225	17,903,428	46,835,787	1,425,791
Passenger..... \$	125,241	—	17,440,449	43,502,300	1,090,186
Mail..... \$	142,230	—	19,704	1,232,415	—
Freight..... \$	166,361,018	11,141,137	76,509	284,419	57,637
Other..... \$	3,438,345	326,088	366,766	1,816,653	277,968
Operating Expenses..... \$	160,246,794	8,836,750	17,615,528	45,598,160	1,282,329
Net Operating Revenue..... \$	9,820,040	2,630,475	287,900	1,237,627	143,462
Traffic—					
Passengers..... No.	580,086	6,916	176,319,079	92,993,618	3,255,677
Freight carried ¹ ton	22,690,245	4,058,896	67,042	27,900	692
Bus miles..... No.	833,717	156,869	36,863,520	102,849,636	5,167,311
Gasoline consumed..... gal.	51,939,993	5,013,527	6,369,669	14,253,895	673,722
Diesel oil consumed..... “	7,773,547	27,885	1,068,385	3,048,133	—
Working proprietors..... No.	624	1,553	19	36	172
Allowances of working proprietors. \$	2,549,348	2,862,309	52,897	128,775	251,217
1955					
Carriers Reporting..... No.	912	1,769	56	114	87
Cost of Land, Buildings, Equipment, etc. \$	132,657,080	11,619,187	18,427,949	56,455,540	1,035,884
Revenue..... \$	206,266,011	13,759,511	15,802,389	46,769,984	915,684
Passenger..... \$	2,651,896	—	15,310,266	43,579,922	749,208
Mail..... \$	604,911	2	57,671	1,463,377	2
Freight..... \$	199,515,522	13,137,153	257,384	296,888	4,286
Other..... \$	3,493,682	622,358	171,068	1,429,797	162,190
Operating Expenses..... \$	192,717,780	10,771,992	15,232,665	44,131,888	824,587
Net Operating Revenue..... \$	13,548,231	2,987,519	549,724	2,638,096	91,097
Traffic—					
Passengers..... No.	414,070	..	155,014,247	90,349,539	1,808,178
Freight carried ¹ ton	23,995,693	..	—	60,500	133
Bus miles..... No.	499,738	..	31,583,462	98,963,082	3,716,732
Gasoline consumed..... gal.	61,945,737	..	5,190,194	12,704,186	434,683
Diesel oil consumed..... “	8,740,265	..	1,192,321	4,248,191	—
Working proprietors..... No.	655	..	15	32	85
Allowances of working proprietors. \$	2,778,532	..	34,361	174,083	141,322

¹ Incomplete coverage.² Included with "Other".

Motor Vehicle Accidents.—Motorists are required by law to report accidents but complete statistics of these accidents are not available for all provinces. Statistics on all deaths from motor vehicle accidents are shown in Table 11. A direct comparison of such statistics between the provinces is of little value because of differences in size, population, motor vehicle density, etc., but, to put them on somewhat the same basis, the average number of deaths per 10,000 registered motor vehicles has been tabulated. These data still give no weight to differences in use of motor vehicles, variations in climate, road conditions, tourist cars, etc., all of which are factors in accidents.

Data presented in Table 12 relate to traffic accidents only and consequently may not be compared with Table 11 which includes details of fatalities occurring elsewhere than on public streets or roads.

11.—Deaths Resulting from Motor Vehicle Traffic and Non-traffic Accidents by Province 1947-56

NOTE.—Figures for 1926-35 will be found in the 1941 Year Book, p. 578; for 1936-44 in the 1948-49 edition, pp. 712-713; and for 1945-46 in the 1956 Year Book, pp. 819-820.

Year	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
DEATHS BY PLACE OF OCCURRENCE											
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1947.....	...	15	83	104	476	753	77	51	103	207	1,869
1948.....	...	5	96	118	599	782	81	87	125	193	2,086
1949.....	...	11	102	96	645	873	105	85	172	176	2,265
1950.....	18	7	94	103	682	850	75	91	162	188	2,270
1951.....	26	20	103	122	818	991	102	93	184	227	2,686
1952.....	25	26	115	139	931	1,067	112	131	188	223	2,957
1953.....	28	14	133	124	959	1,119	111	153	261	219	3,121
1954.....	33	14	149	131	769	1,096	132	86	215	232	2,857
1955.....	47	18	121	147	894	1,177	104	133	203	235	3,079
1956.....	46	17	150	150	1,057	1,245	160	138	269	312	3,544
DEATHS PER 10,000 REGISTERED MOTOR VEHICLES											
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1947.....	...	15.08	11.81	20.16	16.05	9.41	6.87	3.22	6.63	11.52	10.17
1948.....	...	4.43	12.58	18.92	17.83	8.94	6.33	5.19	7.19	9.55	10.25
1949.....	...	8.33	12.22	14.27	16.76	9.00	7.51	4.59	8.58	7.65	9.89
1950.....	10.99	4.55	9.92	13.84	15.73	7.70	4.75	4.55	7.02	6.95	8.74
1951.....	12.96	11.84	9.78	14.69	16.34	8.22	5.96	4.32	7.08	7.79	9.36
1952.....	10.58	13.89	10.00	15.47	16.19	8.26	5.96	5.53	6.45	6.94	9.37
1953.....	9.47	6.90	10.26	13.20	15.52	7.96	5.45	5.94	8.19	6.28	9.10
1954.....	9.59	6.71	11.19	13.22	11.41	7.35	6.27	3.22	6.35	6.24	7.84
1955.....	11.82	8.13	8.15	13.78	12.02	7.28	4.67	4.84	5.69	5.74	7.81
1956.....	10.05	8.18	9.88	13.52	12.81	7.28	6.72	4.74	7.06	6.92	8.38

12.—Motor Vehicle Traffic Accidents by Province 1955 and 1956

Item	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1955												
Accidents Reported.....	2,266	828	10,876	6,169	..	63,219	12,960	9,048	17,041	22,030	409	144,846
Fatal—												
Resulting in death of one or more persons.....	38	12	116	123	..	971	88	110	170	194	3	1,825
Non-fatal—												
Resulting in injury to one or more persons.....	430	151	1,954	1,429	..	17,905	2,107	1,864	2,775	5,532	82	34,229
Resulting in property damage only ¹	1,798	665	8,806	4,617	..	44,343	10,765	7,074	14,096	16,304	324	108,792
Persons Killed.....	46	16	123	137	..	1,111	100	125	197	225	4	2,084
Drivers.....	15	4	26	31	..	373	37	47	76	81	1	691
Passengers.....	14	8	43	40	..	352	40	50	71	79	2	699
Pedestrians.....	15	3	53	61	..	334	21	17	41	55	1	601
Bicyclists.....	1	1	1	1	..	26	1	2	1	5	—	72
Motorcyclists and passengers.....	—	—	—	—	3	23	—	—	3	5	—	—
Others.....	1	—	—	2	..	3	1	9	5	—	—	21
Persons Injured.....	538	188	2,611	1,822	..	26,246	2,973	2,723	4,335	8,263	129	49,828
Drivers.....	113	63	726	554	..	8,236	897	993	1,462	2,498	44	15,586
Passengers.....	177	93	1,079	769	..	11,449	1,429	1,381	2,109	4,232	80	22,798
Pedestrians.....	218	27	722	412	..	4,871	497	244	573	1,043	4	8,611
Bicyclists.....	17	2	82	—	..	1,007	—	65	107	317	—	—
Motorcyclists and passengers.....	3	1	2	—	76	631	140	24	70	154	1	2,099
Others.....	10	2	—	11	..	52	10	16	14	19	—	134
Property Damage Caused¹.....\$'000	830	285	2,649	2,203	..	26,535	..	3,194	6,053	8,653	238	..

For footnote, see end of table, p. 844.

12.—Motor Vehicle Traffic Accidents by Province 1955 and 1956—concluded

Item	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1956												
Accidents Reported.....	2,969	734	9,410	5,689	..	71,399	9,989	10,437	19,060	24,905	441	155,033
Fatal—												
Resulting in death of one or more persons.....	41	15	138	132	705	1,008	110	106	203	272	6	2,736 ²
Non-fatal—												
Resulting in injury to one or more persons.....	592	180	1,785	1,467	12,982	19,358	2,396	2,216	3,170	6,386	78	50,610 ²
Resulting in property damage only ¹	2,336	539	7,487	4,090	..	51,033	7,483	8,115	15,687	18,247	357	115,374
Persons Killed.....	43	16	152	151	803	1,180	145	134	236	316	8	3,184²
Drivers.....	8	9	61	35	..	422	53	42	97	105	4	836
Passengers.....	9	3	40	46	..	387	47	53	90	104	2	781
Pedestrians.....	26	4	46	66	..	310	38	29	43	94	2	658
Bicyclists.....	—	—	5	3	..	31	2	3	2	6	—	89
Motorcyclists and pas- sengers.....	—	—	—	1	..	28	2	—	1	6	—	89
Others.....	—	—	—	1	..	2	3	7	3	1	—	17
Persons Injured.....	776	267	2,500	2,151	17,163	28,626	3,434	3,373	4,771	9,700	123	72,884²
Drivers.....	169	93	803	592	..	9,496	1,054	1,254	1,641	2,966	41	18,109
Passengers.....	284	138	1,034	982	..	12,362	1,566	1,726	2,357	5,013	72	25,534
Pedestrians.....	301	29	586	475	..	4,945	606	293	591	1,140	7	8,973
Bicyclists.....	12	4	66	88	..	1,071	146	54	130	327	—	2,985
Motorcyclists and pas- sengers.....	5	2	4	14	..	721	49	23	45	236	2	120
Others.....	5	1	7	..	..	31	13	23	7	18	1	120
Property Damage Caused¹.....	\$'000 1,274	265	3,006	2,287	..	32,645	3,161	3,889	7,250	10,902	244	64,923

¹ As of May 1, 1956, all reported accidents are those resulting in property damage estimated at \$100 or over. Previously the minimum property damage varied in the different provinces from \$25 to \$100. ² Includes Quebec.

PART IV.—WATER TRANSPORT*

The Canada Shipping Act.—Legislation regarding all phases of shipping is consolidated in the Canada Shipping Act (R.S.C. 1952, c. 29). Under the Act and its amendments the Parliament of Canada accepts full responsibility for the regulation of Canadian shipping.

Section 1.—Shipping Facilities and Traffic

A special article on the importance of traffic using the Great Lakes-St. Lawrence Seaway appears in the 1956 Year Book, pp. 821-829.

Subsection 1.—Shipping

All waterways including canals and inland lakes and rivers are open on equal terms, except in the case of the coasting trade, to the shipping of all countries of the world so that the commerce of Canada is not dependent entirely upon Canadian shipping. However a large part of the inland and coastal traffic is carried in ships of Canadian registry.

* Information and statistics dealing with this subject have been supplied as follows: aids to navigation, canals, harbours, administrative services, and marine services by the Department of Transport and the National Harbours Board; the St. Lawrence Seaway by the St. Lawrence Seaway Authority; part of the financial statistics by the Department of Public Works; shipping subsidies by the Director of Subsidized Steamship Services, Canadian Maritime Commission; Panama Canal by the Governor of the Panama Canal Zone; other canal traffic and statistics of shipping by the Public Finance and Transportation Division, Dominion Bureau of Statistics.

Canadian Registry.—Under Part I of the Canada Shipping Act all ships in excess of 10 tons net register are required to be registered; ships of lower tonnage may be registered voluntarily, otherwise they are required to be operated under a Vessel Licence if powered by a motor of 10 h.p. or more. Sect. 6 of the Act restricts ownership to British subjects or bodies corporate established under and subject to the laws of some part of Her Majesty's Dominions and having their principal place of business in those Dominions. Under the British Commonwealth Merchant Shipping Agreement all Commonwealth ships are given the general designation 'British Ship'; and a ship that should be but is not registered is not entitled to the privileges accorded to British ships. Ships in the planning stage or in course of construction may be recorded before registry by a Registrar of Shipping.

1.—Vessels on the Canadian Shipping Registry by Province as at Dec. 31, 1954-56

NOTE.—Figures for 1935-53 are given in the corresponding table of previous Year Books beginning with the 1941 edition.

Province or Territory	1954		1955		1956	
	No.	net tons	No.	net tons	No.	net tons
Newfoundland.....	1,255	60,217	1,094	84,032	892	76,378
Nova Scotia.....	227	8,257	5,026	133,784	5,276	134,361
Prince Edward Island.....	4,760	106,240	320	14,665	352	14,442
New Brunswick.....	1,111	41,814	1,188	58,353	1,194	57,655
Quebec.....	1,969	491,161	2,016	715,607	2,092	725,886
Ontario.....	2,025	526,677	2,083	770,179	2,147	780,595
Manitoba.....	102	11,968	108	14,095	110	14,506
Saskatchewan.....	1	147	—	—	—	—
Alberta.....	4	430	7	630	7	630
British Columbia.....	5,092	381,560	5,323	520,282	5,560	538,119
Yukon Territory.....	16	3,572	16	4,413	16	4,413
Northwest Territories.....	6	263	7	326	7	326
Totals.....	16,568	1,632,306	17,188	2,316,396	17,653	2,347,311

Shipping Traffic.—Complete statistics of shipping traffic, comparable with those given for the railways, showing all the freight carried by water, are not available. However, there is a record of the number and tonnage of ships calling at all ports at which there are customs collectors and of cargoes of vessels trading between Canadian and foreign ports. Each vessel visiting a customs port or outport makes a statistical return which is forwarded to the Dominion Bureau of Statistics. Coastwise cargo has been reported from Jan. 1, 1952. Reports are not made for vessels of less than 10 registered net tons.

2.—Vessels Entered at Canadian Ports¹ 1946-55

NOTE.—Figures for the years ended Mar. 31, 1929-35 are given in the 1941 Year Book, p. 597; for 1936-44 in the 1948-49 edition, p. 733; and for 1945 in the 1956 Year Book, p. 830.

Year	In Foreign Service ²		In Coasting Service		Totals	
	Vessels	Net Tons Registered	Vessels	Net Tons Registered	Vessels	Net Tons Registered
	No.	No.	No.	No.	No.	No.
1946.....	26,461	30,367,071	67,014	45,559,014	93,475	75,926,085
1947.....	27,868	35,926,095	73,439	51,823,502	101,307	87,749,597
1948.....	31,138	39,443,055	75,141	52,453,382	106,279	91,896,437
1949.....	30,565	40,088,377	82,012	56,037,003	112,577	96,125,380
1950.....	31,420	42,816,949	84,065	56,066,997	115,485	98,883,946
1951.....	32,304	47,508,342	86,571	60,802,798	118,875	108,311,140
1952.....	33,782	52,156,098	79,722	56,776,504	113,504	108,932,602
1953.....	34,400	56,589,078	88,675	67,417,391	123,075	124,006,469
1954.....	34,079	54,767,687	84,890	64,291,085	118,969	119,058,772
1955.....	34,432	58,018,365	86,010	67,228,840	120,442	125,247,205

¹ Exclusive of passenger service.

² Sea-going and inland international.

3.—Vessels Entered at each of the Principal Canadian Ports 1955

NOTE.—Details of shipping at all ports in Canada are given in DBS publication, *Shipping Report*.

Province and Port	In Foreign Service ¹		In Coasting Service		Totals	
	Vessels	Net Tons Registered	Vessels	Net Tons Registered	Vessels	Net Tons Registered
	No.	No.	No.	No.	No.	No.
Newfoundland²	2,081	2,656,033	5,963	2,631,669	8,044	5,287,702
Bell Island.....	188	793,427	80	210,773	268	1,004,200
Botwood.....	70	199,048	172	42,370	242	241,418
Corner Brook.....	164	329,405	522	546,938	686	876,343
Port aux Basques.....	45	15,606	860	421,180	905	436,786
St. John's.....	708	795,433	1,012	455,859	1,720	1,251,292
Prince Edward Island²	77	107,707	208	133,767	285	241,474
Charlottetown.....	40	61,022	108	79,008	148	140,030
Nova Scotia²	4,305	6,907,492	6,580	3,890,286	10,885	10,797,778
Digby.....	105	52,209	322	491,261	427	543,470
Halifax.....	1,344	5,100,545	918	1,005,041	2,262	6,105,586
North Sydney.....	327	73,946	1,826	655,765	2,153	729,711
Sydney.....	181	339,001	832	1,243,094	1,013	1,582,095
Yarmouth.....	310	27,912	313	22,576	623	50,488
New Brunswick²	4,384	2,154,773	3,048	1,178,005	7,432	3,332,778
Campobello.....	212	4,965	14	422	226	5,387
Saint John.....	552	1,750,969	666	693,599	1,218	2,444,568
Quebec²	4,304	12,791,180	13,086	11,818,455	17,390	21,609,635
Baie Comeau.....	37	84,533	709	279,008	746	363,541
Montreal.....	2,130	5,365,459	3,999	5,036,016	6,129	10,401,475
Port Alfred.....	582	1,815,548	814	630,076	1,396	2,445,624
Quebec.....	719	2,931,582	2,022	2,497,701	2,741	5,429,283
Three Rivers.....	265	615,041	2,481	1,430,366	2,746	2,045,407
Ontario²	6,986	14,928,229	11,526	17,754,364	18,512	32,682,593
Amherstburg.....	61	98,107	66	36,451	127	134,558
Cobourg.....	14	20,474	66	65,133	80	85,607
Cornwall.....	152	160,299	333	398,495	485	558,794
Fort William.....	209	638,682	549	1,626,944	758	2,265,626
Hamilton.....	835	3,070,234	751	866,728	1,586	3,936,962
Kingston.....	271	104,362	779	902,257	1,050	1,006,619
Midland.....	53	139,330	220	470,338	273	609,668
Port Arthur.....	434	1,405,033	840	3,015,573	1,274	4,420,606
Port Colborne.....	418	781,717	633	1,475,819	1,051	2,257,536
Port McNicoll.....	1	3,048	63	238,535	64	241,583
Prescott.....	184	280,011	441	923,785	625	1,203,796
St. Catharines.....	55	102,270	119	109,153	174	211,423
Sarnia.....	435	808,807	819	1,532,404	1,254	2,341,211
Sault Ste. Marie.....	564	2,020,711	419	582,270	983	2,602,981
Thorold.....	133	262,299	381	597,147	514	859,446
Toronto.....	879	1,453,546	1,358	1,676,063	2,237	3,129,609
Windsor.....	313	751,803	395	566,271	708	1,318,074
Manitoba (Churchill)	38	145,008	—	—	38	145,008
British Columbia²	12,257	18,327,943	45,599	29,822,294	57,856	48,150,237
Nanaimo.....	630	741,227	4,320	7,288,240	4,950	8,029,467
New Westminster.....	900	1,674,141	3,143	1,489,286	4,043	3,163,427
Ocean Falls.....	53	220,314	675	595,348	728	815,692
Port Alberni.....	186	580,156	623	275,188	809	855,344
Powell River.....	218	278,902	3,527	985,335	3,745	1,264,237
Prince Rupert.....	1,114	420,124	1,449	590,410	2,563	1,010,534
Vancouver.....	3,447	6,956,054	24,476	14,007,529	27,923	20,963,583
Victoria.....	3,056	5,815,716	3,799	3,132,792	6,855	8,948,508
Grand Totals	34,432	58,018,365	86,010	67,223,840	120,442	125,247,205

¹ Sea-going and inland international.² Includes small ports not shown separately.

4.—Cargoes at Canadian Ports Loaded or Unloaded from Vessels in Foreign Service by Province 1953-55

Province and Year	Loaded	Unloaded	Province, Territory and Year	Loaded	Unloaded
	tons	tons		tons	tons
Newfoundland—			Ontario—		
1953.....	2,742,764	671,606	1953.....	6,320,032	23,808,278
1954.....	2,702,943	790,442	1954.....	4,959,342	17,670,912
1955.....	3,194,273	826,047	1955.....	6,359,084	20,944,184
Prince Edward Island—			Manitoba—		
1953.....	55,173	27,741	1953.....	322,551	2,784
1954.....	51,581	29,021	1954.....	367,511	4,685
1955.....	109,272	47,629	1955.....	388,930	4,161
Nova Scotia—			British Columbia—		
1953.....	4,138,305	2,115,749	1953.....	8,871,878	3,140,263
1954.....	4,107,616	1,980,140	1954.....	8,810,720	2,115,586
1955.....	5,208,677	2,362,610	1955.....	8,423,651	1,885,991
New Brunswick—			Yukon and N.W.T.—		
1953.....	1,643,060	636,729	1953.....	—	3
1954.....	1,334,504	741,042	1954.....	—	—
1955.....	2,010,348	850,620	1955.....	—	—
Quebec—			Totals—		
1953.....	8,108,442	8,288,724	1953.....	32,202,205	38,691,877
1954.....	8,396,138	8,942,338	1954.....	39,730,355	32,274,166
1955.....	13,808,479	8,959,540	1955.....	39,592,714	35,880,782

Subsection 2.—Harbours

Water transportation cannot be studied with any degree of completeness without taking into consideration the co-ordination of land and water transportation at many of the ports. Facilities provided to enable interchange movements include the necessary docks and wharves, some for passenger traffic but most of them for freight, warehouses for the handling of general cargo, and special equipment for such bulk freight as lumber, coal, oil and grain. Facilities may include cold storage warehouses, harbour railway and switching connections, grain elevators, coal bunkers, oil storage tanks and, in the chief harbours, dry dock accommodation.

Eight of the principal harbours of Canada are administered by the National Harbours Board. Seven other harbours come under the supervision of the Department of Transport and are administered by commissions that include municipal as well as Federal Government appointees. In addition, there are about 300 public harbours that are under the direct supervision of the Department of Transport. These harbours are administered under rules and regulations approved by the Governor General in Council. Harbour masters have been appointed by the Minister of Transport for 131 of these harbours, their remuneration being paid from fees levied on vessels under the terms of the Canada Shipping Act.

At most ports, in addition to the harbour facilities operated by the National Harbours Board or other operating commission, there are dock and handling facilities owned by private companies such as railway, pulp and paper, oil and sugar industries. At a number of ports there are also dry docks; these are dealt with separately at p. 851.

5.—Facilities of the Six Principal Harbours as at Dec. 31, 1956

NOTE.—The facilities at these ports include those under the control of other agencies as well as those of the National Harbours Board.

Item	Halifax	Saint John	Quebec	Three Rivers	Montreal	Vancouver
Minimum depth of approach channel..... ft.	51	30	35	35	35	40
Harbour railway..... miles	31	63	23	5	62	75
Piers, wharves, jetties, etc.... No.	88	32	41	19	113	102
Length of berthing..... ft.	35,445	18,710	33,650	8,690	53,850	31,440
Transit-shed floor space.....sq. ft.	1,401,942	1,000,000	650,600	255,840	2,564,467	1,450,600
Cold storage warehouse capacity.....cu. ft.	1,719,000	820,000	500,000	—	2,909,200	3,031,417
Grain Elevators—						
Capacity..... bu.	4,152,500	3,000,000	4,000,000	7,500,000 ¹	15,162,000	21,000,000
Loading rate..... bu. per hr.	90,000	150,000	90,000	40,000	500,000	320,000
Floating crane capacity..... tons	80	65	75	—	75	85
Coal dock storage capacity.... "	57,400	—	215,000	300,000	1,340,000	—
Oil tank storage capacity..... gal.	175,344,865	27,000,000	130,826,000	1,410,000	1,059,750,000	234,589,277

¹ Includes a 3,000,000-bu. grain-storage shed connected with the elevator.

National Harbours Board.—The National Harbours Board, a Crown corporation established in 1936, is charged with the administration and operation of the following properties: port facilities such as wharves and piers, transit sheds, grain elevators, cold storage warehouses, terminal railways, etc., at the harbours of Halifax, Saint John, Chicoutimi, Quebec, Three Rivers, Montreal, Vancouver, and Churchill; grain elevators at Prescott and Port Colborne; and the Jacques Cartier Bridge at Montreal. These facilities represent a capital investment of approximately \$263,000,000. Current operating revenues and expenditures are given in Table 30, pp. 867-868.

Harbour Traffic.—The freight movement through a large port takes a number of different forms. The overseas movement of freight loaded on and unloaded from sea-going vessels frequently constitutes a surprisingly small part of the total. Usually the volume from coasting vessels is larger. There is, as well, the in-transit movement in vessels that pass through the harbour without loading or unloading and the movement from one point to another within the harbour, which in many ports amounts to a large volume. It is not possible to obtain statistics of the total freight handled at all the ports and harbours of Canada because many of them are small and without the staff necessary to maintain detailed records. However, the National Harbours Board prepares an annual report of the water-borne cargo loaded and unloaded at the eight ports under its control. Six of these are the principal ports of Canada and the cargo handled at each is shown in Table 6. The figures include freight carried by coasting and inland international as well as by sea-going shipping; they include all cargo loaded and unloaded, whether by facilities under the jurisdiction of the Board or at private docks and terminals. Cross-harbour movements, ballast (non-revenue), bunkers, ships' stores, mail and passengers' baggage are not included.

6.—Principal Commodities in Water-Borne Cargo Loaded and Unloaded at Each of the Six Principal Ports 1955 and 1956

NOTE.—Commodities totalling less than 50,000 tons in 1956 are not listed.

Port and Commodity	1955			1956		
	Inward	Outward	Total	Inward	Outward	Total
	tons	tons	tons	tons	tons	tons
Montreal—						
Grain.....	2,396,765	2,290,958	4,687,723	2,735,841	3,394,712	6,130,553
Petroleum oil, fuel.....	697,767	1,719,737	2,417,504	349,502	2,036,881	2,386,383
Petroleum oil, crude.....	980,318	294,663	1,274,981	1,621,571	315,347	1,936,918
Coal, bituminous.....	1,345,453	1,314	1,346,767	1,282,387	—	1,282,387
Gasoline.....	153,246	892,474	1,045,720	177,772	915,107	1,092,879
Cement.....	371,422	199,260	570,682	394,027	154,154	548,181
Sugar, raw.....	379,777	3	379,780	393,942	3	393,945
Gypsum, crude.....	403,671	31,974	435,645	328,197	16,650	344,847
Flour, wheat.....	3	306,386	306,389	—	320,206	320,206
Iron or steel band, bars, <i>n.o.p.</i> , hoop, plates, rods, sheets, skelp, strip and tin plate.....	44,255	23,166	67,422	167,132	25,199	192,331
Iron or steel, scrap.....	7,055	129,677	136,732	975	172,893	173,868
Grain products (mill products ex- cept wheat flour).....	6,289	123,118	129,407	46	159,265	159,311
Petroleum oil, refined, <i>n.o.p.</i>	31,189	75,502	106,691	56,916	101,280	158,196
Iron or steel, structural.....	39,795	4,885	44,680	145,450	5,471	150,930
Phosphate rock.....	102,917	7,121	110,038	137,658	4,424	142,082
Asbestos and asbestos manufac- tures.....	4,222	78,708	82,930	10,034	103,280	113,314
Coal, anthracite.....	177,018	7,580	184,598	104,727	2,833	107,560
Oil cake and oil cake meal.....	—	86,438	86,438	—	100,992	100,992
Iron ore.....	61,286	48,805	110,091	46,043	46,043	92,086
Molasses.....	79,673	19,052	98,725	73,158	18,549	91,707
Motor vehicles and parts.....	25,739	54,422	80,161	41,136	42,215	83,351
Iron or steel manufactures, <i>n.o.p.</i>	54,012	16,755	70,767	63,121	19,672	82,793
Glass and glass manufactures.....	72,070	4,165	76,235	75,213	5,203	80,416
Lumber (planks, boards and floor- ing) and square timber.....	20,823	70,767	91,590	16,623	55,151	71,774
Chrome ore.....	37,422	14,273	51,695	46,495	18,990	65,485
Nickel and nickel manufactures.....	101	47,939	48,040	124	63,651	63,775
Salt.....	20,307	436	20,743	58,420	90	58,510
Aluminum, in bars, billets, blocks, ingots, pigs, rods, sheets or slabs.....	1,054	7,899	8,953	7,966	47,368	55,334
Copper, in bars, billets, cakes, cathodes, ingots or slabs.....	287	52,211	52,498	2,734	52,503	55,237
Machinery and parts (except agricultural).....	33,141	20,824	53,965	27,466	24,553	52,019
Flourspar.....	16,852	17,465	34,317	25,950	25,490	51,440
Fruits, fresh, <i>n.o.p.</i>	1,054	997	2,051	519	50,622	51,141
Totals, Commodities over 50,000 tons in 1956.....	7,564,984	6,648,974	14,213,958	8,391,151	8,298,797	16,689,951
Totals, All Commodities.....	8,359,659	7,489,997	15,849,566	9,284,316	9,144,489	18,428,835
Vancouver—						
Grain.....	—	2,392,983	2,392,983	—	3,566,876	3,566,876
Logs, masts, piling, pitprops, poles, posts, spars and ties.....	1,140,436	147,868	1,288,304	1,011,445	146,638	1,158,083
Lumber (planks, boards and floor- ing) and square timber.....	544,541	580,369	1,124,910	743,208	369,401	1,112,609
Petroleum oil, fuel.....	397,628	487,291	884,919	414,756	533,545	948,301
Petroleum oil, crude.....	5,748	—	5,748	—	887,154	887,154
Sand and gravel.....	655,140	3,105	658,245	794,011	9,858	803,869
Gasoline.....	38,347	351,804	390,151	36,299	499,917	536,216
Wood pulp.....	291,087	29,066	320,153	292,971	33,342	326,313
Flour, wheat.....	144	268,898	269,042	130	254,903	255,033
Iron or steel tubes, pipes and fittings.....	88,619	2,844	91,463	194,328	54,960	249,297
Cement.....	165,032	20,068	185,100	181,172	20,575	201,747
Hog fuel.....	—	205,640	205,640	—	195,352	195,352
Pulpwood.....	—	200,558	200,558	—	181,529	181,529
Motor vehicles and parts.....	78,615	25,198	103,813	113,877	47,549	161,426
Newsprint.....	170,890	8,441	179,331	153,454	6,527	159,981
Kerosene.....	40,937	62,523	103,460	73,671	67,542	141,213

6.—Principal Commodities in Water-Borne Cargo Loaded and Unloaded at Each of the Six Principal Ports 1955 and 1956—continued

Port and Commodity	1955			1956		
	Inward	Outward	Total	Inward	Outward	Total
	tons	tons	tons	tons	tons	tons
Vancouver—concluded						
Iron or steel band, bars, <i>n.o.p.</i> , hoop, plates, rods, skeets, skelp, strip and tin plate.....	54,267	1,630	55,897	102,882	2,766	105,648
Sugar, raw.....	89,760	—	89,760	100,204	—	100,204
Coal, bituminous.....	33,519	51,145	84,664	26,968	71,034	98,002
Ores and concentrates, <i>n.o.p.</i>	88,042	329	88,371	80,310	14,161	94,471
Machinery and parts (except agricultural).....	20,979	16,836	37,815	32,600	36,089	68,689
Lime.....	55,558	1,100	56,658	50,925	2,404	53,329
Totals, Commodities over 50,000 tons in 1956.....	3,959,289	4,857,696	8,816,985	4,403,211	7,092,131	11,495,342
Totals, All Commodities.....	5,117,768	5,867,244	10,985,012	5,295,893	8,065,411	13,361,304
Halifax—						
Petroleum oil, crude.....	1,039,118	—	1,039,118	1,780,032	—	1,780,032
Petroleum oil, fuel.....	792,930	716,081	1,509,011	523,732	869,635	1,393,367
Gypsum, crude.....	—	684,939	684,939	—	1,290,756	1,290,756
Grain.....	1,026	451,725	452,751	4,121	609,494	613,615
Gasoline.....	383,240	210,209	593,449	307,740	264,708	572,448
Flour, wheat.....	137	88,757	88,894	120	98,552	98,672
Fish (incl. shellfish) dried, pickled, salted or smoked.....	37,887	69,363	107,250	25,464	60,252	85,716
Bauxite ore.....	—	—	—	41,575	40,510	82,085
Lumber (planks, boards and flooring) and square timber.....	1,207	77,776	78,983	219	64,272	64,491
Cement.....	33,965	4,610	38,575	61,064	841	61,905
Motor vehicles and parts.....	15,320	19,447	34,767	38,923	13,586	52,509
Totals, Commodities over 50,000 tons in 1956.....	2,304,830	2,322,907	4,627,737	2,782,990	3,312,606	6,095,596
Totals, All Commodities.....	2,735,999	2,883,070	5,619,069	3,134,516	3,716,380	6,850,896
Quebec—						
Petroleum oil, fuel.....	744,439	17,939	762,378	939,760	33,846	973,606
Grain.....	313,633	294,756	608,389	321,535	521,309	842,844
Pulpwood.....	684,416	—	684,416	773,353	—	773,353
Gasoline.....	248,794	5,018	253,812	371,564	11,028	382,592
Coal, bituminous.....	283,372	490	283,862	241,067	192	241,259
Cement.....	98,434	35,404	133,838	113,981	109,839	223,820
Ores and concentrates, <i>n.o.p.</i>	1,703	101,891	103,594	—	166,415	166,415
Asbestos and asbestos manufactures.....	—	166,863	166,863	—	161,519	161,519
Newsprint.....	773	130,383	131,156	4,030	138,734	142,764
Cement clinker.....	—	—	—	66,247	—	66,247
Totals, Commodities over 50,000 tons in 1956.....	2,375,564	752,741	3,128,305	2,831,537	1,142,882	3,974,419
Totals, All Commodities.....	2,518,954	877,969	3,396,923	2,987,331	1,293,915	4,281,246
Three Rivers—						
Pulpwood.....	1,508,358	—	1,508,358	1,663,547	4,414	1,667,961
Grain.....	288,464	282,785	571,249	454,581	500,562	955,143
Petroleum oil, fuel.....	269,531	2,470	272,001	302,036	9,426	311,462
Coal, bituminous.....	296,884	—	296,884	260,185	—	260,185
Newsprint.....	—	126,302	126,302	—	158,878	158,878
Gasoline.....	64,969	21	64,990	63,053	—	63,053
Totals, Commodities over 50,000 tons in 1956.....	2,428,206	411,578	2,839,784	2,743,402	673,250	3,416,652
Totals, All Commodities.....	2,498,311	492,441	2,990,752	2,845,098	760,336	3,605,434

6.—Principal Commodities in Water-Borne Cargo Loaded and Unloaded at Each of the Six Principal Ports 1955 and 1956—concluded

Port and Commodity	1955			1956		
	Inward	Outward	Total	Inward	Outward	Total
	tons	tons	tons	tons	tons	tons
Saint John—						
Grain.....	—	693,591	693,591	109	859,551	859,660
Petroleum oil, fuel.....	390,179	26,161	416,340	430,708	37,343	468,051
Sugar, raw.....	207,635	2,794	210,429	229,340	—	229,340
Gasoline.....	176,906	24,791	201,697	180,006	25,721	205,727
Newsprint.....	—	108,903	108,903	—	103,000	103,000
Oil cake and oil cake meal.....	—	58,123	58,123	—	100,203	100,203
Lumber (planks, boards and flooring) and square timber.....	8,978	122,427	131,405	7,990	82,226	90,216
Flour, wheat.....	4	116,061	116,065	—	88,368	88,368
Motor vehicles and parts.....	33,426	16,679	50,105	46,060	14,297	60,357
Totals, Commodities over 50,000 tons in 1956.....	817,123	1,169,530	1,986,653	894,213	1,310,709	2,204,922
Totals, All Commodities.....	1,153,193	1,673,335	2,826,528	1,295,858	1,761,393	3,057,251

Dry Docks.—The Department of Public Works of the Federal Government owns five dry docks—one at Kingston, Ont., two at Lauzon, Que., and two at Esquimalt, B.C.—and operates all except the one at Kingston which is under lease to the Canadian Shipbuilding and Engineering Company of Kingston. The old Esquimalt dry dock was temporarily transferred to the Department of National Defence on Nov. 1, 1934, and, when commercially required, it will be returned to the control of the Department of Public Works. Each of the large dry docks at Lauzon, Que., and Esquimalt, B.C., can be divided for use of small vessels; the larger Lauzon dock cost approximately \$4,500,000 and the larger Esquimalt dock approximately \$7,000,000.

7.—Dimensions of Dry Docks Owned by the Federal Government

Location	Length	Width at—			Depth of Water on Sill	Rise of Tide	
		Coping	Bottom	Entrance		Spring	Neap
	ft.	ft.	ft.	ft.	ft.	ft.	ft.
Lauzon, Que., <i>Champlain</i>	1,150.0	120.0	105.0	120.0	40.0 H.W.	18	13.3
Lauzon, Que., <i>Lorne</i>	600.3	100.0	59.5	62.0	25.7 H.W.	18	13.3
Esquimalt, B.C. (old dock).....	450.8 ¹	90.0	41.0	65.0	28.8 H.W. ²	7 to 10	3 to 8
Esquimalt, B.C.....	1,173.8	149.0	126.0	135.0	40.0 H.W.	7 to 10	3 to 8
Kingston, Ont. ³	370.0	55.0	47.0	55.0	16.8½ L.W.	—	—

¹ Face of caisson to vertical face at head, 481.0 ft.; length of pad on which keel blocks rest, 403.5 ft. ² Over keel blocks at H.W. 10 ft., tide 26.1 ft. ³ Under lease to Canadian Shipbuilding and Engineering Company, Kingston.

8.—Dimensions and Cost of Dry Docks Subsidized under the Dry Docks Subsidies Act 1910

Location	Length	Width	Depth Over Sill	Total Cost	Subsidy
	ft.	ft.	ft.	\$	
Collingwood No. 1, Ont.....	518.3	59.8	15.5	500,000	1
Collingwood No. 2, Ont.....	412.0	95.0	16.0	306,965	1
Port Arthur, Ont.....	701.0	77.5	16.2	1,258,050	1
Montreal, Que. (floating dock), <i>Duke of Connaught</i>	601.0	98.0	38.0	3,000,000	1
Saint John, N.B.....	1,157.8	131.5	40.3	5,500,000	4½ p.c. for 35 years
North Vancouver, B.C. (floating dock).....	556.5	98.0	28.0 ²	2,500,000	4½ p.c. for 35 years

¹ Subsidy payments have been completed.

² Over sill (H.W.).

Subsection 3.—Canals*

The canals and canalized waters of Canada under the jurisdiction of the Department of Transport comprise a series of waterways providing navigation for 1,875 miles inland from salt water. The canals included under the two classifications—main or primary canals and subsidiary or secondary canals—are listed in Table 9 with their locations, lengths and lock complement. In addition to these, the federal Department of Public Works administers the St. Andrews Lock (length, width and draught, respectively, 215, 45 and 17 feet) on the Red River at Selkirk, Man., and the lock at Poupore, Que. A few small locks are operated by provincial authorities.

During 1956, 40,016,565 tons of freight and 32,865 vessels passed through the canals as compared with 34,874,198 tons of freight and 28,172 vessels during 1955. In addition to freight and passenger vessels, thousands of pleasure craft are locked through the canals. Vessels locking at Sault Ste. Marie during 1956 carried 121,151 passengers as compared with 178,006 in 1955.

Revenue from canals during the year ended Mar. 31, 1957, amounted to \$1,790,202 of which \$1,349,989 was derived from rentals for hydraulic and land privileges and wharfage. In the previous fiscal year the total revenue was \$2,163,611 with rentals and wharfage amounting to \$1,330,797.

* A special article on the Canals of the St. Lawrence Waterway appears in the 1954 Year Book, pp. 830-833.

**9.—Lengths of Channels and Dimensions of Locks under the Control of the
Department of Transport as at July 1, 1957**

Name	Location	Length of Channel	Locks			
			No.	Minimum Dimensions		
				Length	Width	Depth
		miles		ft.	ft.	ft.
Main Route Canals						
St. Lawrence and Great Lakes—						
Lachine.....	Montreal to Lachine.....	8.74	5	270	45	14
Soulanges.....	Cascades Point to Coteau Landing.....	14.67	5	280	46	14
Cornwall.....	Cornwall to Dickinson Landing.....	11.00	6	270	43 67	14
Farran's Point.....	Farran's Point Rapids.....	1.28	1	800	50	16
Rapide Plat.....	Rapide Plat, Morrisburg.....	3.89	2	270	45	14
Galop.....	Iroquois to Cardinal.....	7.36	3	270	45	14
Welland Ship.....	Port Weller, Lake Ontario, to Port Colborne, Lake Erie.....	27.60	8	859	80	23.5
Sault Ste. Marie.....	St. Mary's Rapids, Sault Ste. Marie.....	1.38	1	900	60	18.25
Subsidiary Canals or Branches						
Canso Canal.....	Canso Causeway, N.S.....	0.70	1	820	80	28
Atlantic Ocean to Bras d'Or Lakes—						
St. Peters.....	St. Peters Bay to Bras d'Or Lakes, Cape Breton, N.S.....	0.50	1	300	47.4	17
Richelieu River—						
St. Ours.....	St. Ours, Que.....	0.12	1	339	45	12
Chambly.....	Chambly to St. Johns, Que.....	11.78	9	120.5	23.25	6.5
Ottawa and Rideau Rivers—						
Ste. Anne.....	Junction of St. Lawrence and Ottawa Rivers.....	0.12	1	200	45	9
Carillon.....	Carillon Rapids, Ottawa River.....	0.94	2	200	43	9
Grenville.....	Long Sault Rapids, Ottawa River.....	5.94	5	200	43	9
Rideau.....	Ottawa to Kingston.....	123.53	47	134	33	5.5
	Rideau Lake to Perth (Tay Branch).....	6.82	2	134	33	5.5

9.—Lengths of Channels and Dimensions of Locks under the Control of the Department of Transport as at July 1, 1957—concluded

Name	Location	Length of Channel	Locks			
			No.	Minimum Dimensions		
				Length	Width	Depth
		miles		ft.	ft.	ft.
Subsidiary Canals or Branches—concluded						
Lake Ontario to Georgian Bay—Trent.....	Trenton to Peterborough lock, Peterborough.....	88.74	18	175	33	8 ¹
	Peterborough lock to Swift Rapids.....	135.71	24	134	33	6
	Swift Rapids to Big Chute.....	8.00	...	...	...	4
	Big Chute to Port Severn.....	8.11	1	100	25	6
	Sturgeon Lake to Lindsay (Scugog Branch).....	10.00	1	142	33	6
	Lindsay to Port Perry (Scugog Branch).....	25.00	—	—	—	4.5
Murray.....	Isthmus of Murray, Bay of Quinte.....	7.53	—	—	—	8.5 ²
	Total.....	509.46				

¹ Notice must be given by vessels of more than 6-foot draught.

² With Lake Ontario at elevation

at 243 feet.

10.—Traffic through Canadian Canals by Nationality of Vessel, Navigation Seasons 1947-56

NOTE.—Figures include duplications where vessels use two or more canals. Figures from 1886 are available in the corresponding table of previous Year Books beginning with the 1902 edition.

Navigation Season	Canadian		United States		United Kingdom		Other	
	Vessels	Registered Tonnage	Vessels	Registered Tonnage	Vessels	Registered Tonnage	Vessels	Registered Tonnage
	No.	No.	No.	No.	No.	No.	No.	No.
1947.....	18,542	18,613,576	2,085	3,667,671	1	1	247	128,622
1948.....	19,859	19,723,768	2,455	3,999,472	1	1	329	220,067
1949.....	21,724	20,773,831	2,159	3,011,023	1	1	336	249,015
1950.....	21,179	21,989,263	2,785	3,175,566	1	1	456	338,636
1951.....	22,141	22,951,468	2,993	3,987,700	1	1	414	309,972
1952.....	22,565	25,608,373	3,081	3,686,781	1	1	676	514,224
1953.....	23,378	27,845,139	2,984	3,777,571	1	1	1,201	919,875
1954.....	21,056	25,303,262	3,145	3,245,555	1	1	1,081	893,778
1955.....	22,758	27,709,232	3,950	3,798,290	200	132,858	1,264	1,044,774
1956.....	27,473	31,019,188	3,776	3,675,511	267	186,978	1,349	1,141,259

¹ Included with Canadian vessels.

11.—Freight Traffic through Canadian Canals by Origin of Cargo, Navigation Seasons 1947-56

NOTE.—Figures include duplication where cargoes pass through two or more canals. Figures from 1886 are available in the corresponding table of previous Year Books beginning with the 1902 edition.

Navigation Season	Canada		United States		United Kingdom		Other		Total
	Tons	P.C. of Total	Tons	P.C. of Total	Tons	P.C. of Total	Tons	P.C. of Total	Tons
1947.....	10,288,481	47.8	11,225,458	52.2	1	1	1	1	21,513,939
1948.....	11,169,714	47.4	12,389,599	52.6	1	1	1	1	23,559,313
1949.....	14,800,509	60.7	9,573,243	39.3	1	1	1	1	24,373,752
1950.....	15,138,009	55.2	12,301,067	44.8	1	1	1	1	27,439,076
1951.....	16,004,284	54.6	13,320,750	45.4	1	1	1	1	29,325,034
1952.....	17,245,051	55.0	14,109,088	45.0	1	1	1	1	31,354,139
1953.....	18,464,479	55.3	14,908,585	44.7	1	1	1	1	33,373,064
1954.....	17,237,542	57.3	12,833,159	42.7	1	1	1	1	30,070,701
1955.....	20,002,540	57.4	14,177,878	40.7	120,827	0.3	572,953	1.6	34,874,198
1956.....	24,698,001	61.7	14,457,217	36.1	106,448	0.3	754,899	1.9	40,016,565

¹ Included with United States.

12.—Tonnage of Products carried by Canal classified by Commodity Group, Navigation Season 1956

NOTE.—Figures include duplications where cargoes use two or more canals.

Canal	Agricultural Products	Animal Products	Manufactures and Miscellaneous	Forest Products	Mineral Products	Total
	tons	tons	tons	tons	tons	tons
Sault Ste. Marie.....	1,670,561	43	943,651	32,911	342,112	2,989,278
Welland Ship.....	6,085,072	15,522	3,864,173	529,664	12,571,830	23,066,261
St. Lawrence River.....	4,523,575	21,186	3,131,941	524,312	5,298,684	13,499,698
Richelieu River.....	2,152	—	95,488	—	1,323	98,963
St. Peters.....	355	661	483	26	175	1,700
Murray.....	—	—	—	—	—	—
Ottawa River.....	—	—	—	—	283,500	283,500
Rideau.....	—	—	89	112	198	399
Trent.....	—	—	289	—	—	289
St. Andrews.....	201	1,925	2,482	3,472	2	8,082
Canso.....	2,993	15,963	39,203	837	9,399	68,395
Totals.....	12,284,909	55,300	8,077,799	1,091,334	18,507,223	40,016,565

13.—Freight Traffic through Canadian Canals by Direction and Origin, Navigation Season 1956 with Totals for 1953-55

NOTE.—Figures include duplications where cargoes pass through two or more canals.

Canal	From Canadian to Canadian Ports		From Canadian to United States Ports ¹		From United States to United States Ports ¹		From United States ¹ to Canadian Ports	
	Up	Down	Up	Down	Up	Down	Up	Down
	tons	tons	tons	tons	tons	tons	tons	tons
Sault Ste. Marie.....	497,053	1,924,737	2,469	268,660	71,042	16,167	187,741	21,409
Welland Ship.....	1,102,549	6,061,585	3,143,270	93,287	788,454	1,095,084	35,039	10,746,993
St. Lawrence River.....	2,565,400	5,276,663	2,776,725	114,899	268,990	316,541	167,181	2,013,299
Richelieu River.....	49,711	5,806	24,122	245	—	—	2,780	16,299
St. Peters.....	727	946	—	27	—	—	—	—
Murray.....	—	—	—	—	—	—	—	—
Ottawa River.....	—	283,500	—	—	—	—	—	—
Rideau.....	205	194	—	—	—	—	—	—
Trent.....	41	248	—	—	—	—	—	—
St. Andrews.....	5,610	2,472	—	—	—	—	—	—
Canso.....	30,787	28,691	100	6,601	—	—	2,216	—
Totals.....	4,252,083	13,584,842	5,946,686	483,719	1,128,486	1,427,792	391,957	12,798,000
	Traffic by Direction		Origins of Cargo		Total Cargo			
	Up	Down	Canada	United States ¹	1956	1955	1954	1953
	tons	tons	tons	tons	tons	tons	tons	tons
Sault Ste. Marie.....	758,305	2,230,973	2,695,600	293,678	2,989,278	2,201,075	2,607,968	3,389,409
Welland Ship.....	5,069,312	17,996,949	10,892,565	12,173,696	23,066,261	20,893,572	17,514,258	19,542,150
St. Lawrence River.....	5,778,296	7,721,402	10,669,803	2,829,895	13,499,698	11,446,620	9,637,034	10,081,992
Richelieu River.....	76,613	22,350	79,884	19,079	98,963	97,130	109,438	94,379
St. Peters.....	727	973	1,700	—	1,700	6,783	3,231	3,841
Murray.....	—	—	—	—	—	667	272	876
Ottawa River.....	—	283,500	283,500	—	283,500	206,525	190,810	243,032
Rideau.....	205	194	399	—	399	413	1,490	1,531
Trent.....	41	248	289	—	289	102	170	239
St. Andrews.....	5,610	2,472	8,082	—	8,082	8,112	6,030	15,815
Canso.....	33,103	35,292	66,179	2,216	68,395	13,199	—	—
Totals.....	11,722,212	28,294,353	24,693,001	15,318,564	40,016,565	34,874,198	30,070,701	33,373,064

¹ Figures for the United States include small amounts of traffic from other foreign countries.

The figures in Tables 12 and 13 include duplications where the same freight passes through two or more canals, but in Table 14 duplications in the traffic passing through the St. Lawrence and Welland Ship Canals and the Canadian lock at Sault Ste. Marie have been eliminated wherever possible.

Grain trans-shipped at Georgian Bay, Lake Erie, or other ports above Montreal is treated as new cargo and as most of this grain has passed through either the Canadian or United States locks at Sault Ste. Marie there are still duplications in the data because of this treatment. These duplications cannot be avoided when net totals for the Canadian canals are computed because it is impossible to ascertain which lock at Sault Ste. Marie was used by the grain reloaded at Port Colborne, Ont., or other trans-shipping port.

14.—St. Lawrence-Great Lakes Traffic using St. Lawrence, Welland Ship and Sault Ste. Marie Canals 1956

Canals Used	Up-bound Freight	Down-bound Freight	Total
	tons	tons	tons
Traffic using Canadian St. Lawrence-Great Lakes System	8,010,110	23,381,224	31,391,334
St. Lawrence only.....	2,395,177	3,497,078	5,892,255
St. Lawrence and Welland Ship.....	3,366,769	3,593,252	6,960,021
St. Lawrence, Welland Ship and Sault Ste. Marie.....	79,460	76,460	155,920
Welland Ship only.....	1,489,859	13,983,461	15,473,320
Welland Ship and Sault Ste. Marie.....	133,224	343,776	477,000
Sault Ste. Marie only.....	545,621	1,887,197	2,432,818
Traffic using United States Locks at Sault Ste. Marie only	13,765,513	92,343,655	106,109,168
Totals	21,775,623	115,724,879	137,500,502

Traffic through the Sault Ste. Marie canals, Canadian and American, has been approximately twice as heavy as the traffic through the Panama Canal during the latest ten years for which records are available. Canal traffic has varied from 20,484,000 tons in 1932, which was less than the Panama traffic, to 109,907,136 tons in 1954. The dominant traffic from a tonnage aspect is iron ore which fluctuated from a low of 3,607,000 tons in 1932 to a high of 98,657,591 tons in 1953. In 1955 this tonnage amounted to 89,396,865, but dropped to 79,085,608 in 1956.

Soft coal has usually been second in volume to iron ore, increasing from 8,676,297 tons during the 1949 season to 13,301,048 tons in 1950; succeeding years brought declines to 7,397,623 tons in 1954, 9,053,769 tons in 1955 and 10,238,048 tons in 1956.

Although wheat ranks third in tonnage, its value over the past quarter-century has been greater generally than that of either iron ore or coal. Other grains have been about one-quarter to one-fifth of the wheat tonnage and a smaller ratio of the value.

The Panama Canal.—The Panama Canal was opened to commercial traffic on Aug. 15, 1914, and has since been a waterway of great importance to the ports of British Columbia, from which vessels leave direct for United Kingdom and other European ports throughout the year. As an alternative route to that of the transcontinental railway lines, this water passage is of vital importance in the solution of the larger transportation problems of the Continent. During World War I the great expectations based upon the opening of the Canal were not realized, because of the scarcity of shipping. However, with the postwar decline in ocean freight rates, an increase in traffic between Canada's Pacific ports and Europe took place and, while the proportion carried in vessels of Canadian registry was comparatively small, the cargo tonnage nevertheless assumed considerable

proportions. During World War II the volume of Canadian traffic through the Canal was again reduced but has since increased considerably. A distinctive feature of this traffic is that most of the tonnage westbound is destined for Canadian West Coast ports, while only a small percentage of the freight originating on the West Coast is unloaded in Eastern Canada.

15.—Traffic to and from the East and West Coasts of Canada via the Panama Canal, Years Ended June 30, 1948-57

NOTE.—Figures from 1921 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Originating on—		Destined for—		Year	Originating on—		Destined for—	
	West Coast	East Coast	West Coast	East Coast		West Coast	East Coast	West Coast	East Coast
	long tons	long tons	long tons	long tons		long tons	long tons	long tons	long tons
1918.....	2,824,394	244,121	162,561	67,215	1953.....	3,560,925	532,810	341,548	219,567
1949.....	2,298,492	188,506	154,524	145,477	1954.....	4,153,577	398,778	402,335	230,295
1950.....	2,707,047	185,076	226,673	143,395	1955.....	4,109,456	301,450	427,825	303,585
1951.....	2,910,246	240,904	372,534	142,741	1956.....	3,636,245	362,740	601,345	313,440
1952.....	3,644,888	287,872	281,960	114,319	1957.....	3,501,015	470,115	760,142	194,225

16.—Commercial Traffic through the Panama Canal, Years Ended June 30, 1948-57

NOTE.—Figures from 1915 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Atlantic to Pacific		Pacific to Atlantic		Totals	
	Vessels	Cargo Tonnage	Vessels	Cargo Tonnage	Vessels	Cargo Tonnage
	No.	long tons	No.	long tons	No.	long tons
1948.....	2,286	8,679,140	2,392	15,438,648	4,678	24,117,788
1949.....	2,387	9,899,088	2,406	15,406,070	4,793	25,305,158
1950.....	2,689	9,483,863	2,759	19,388,430	5,448	28,872,293
1951.....	2,784	11,132,472	2,809	18,940,550	5,593	30,073,022
1952.....	3,184	15,128,995	3,340	18,481,514	6,524	33,610,509
1953.....	3,674	17,329,066	3,736	18,766,283	7,410	36,095,349
1954.....	3,852	18,377,724	3,932	20,717,343	7,784	39,095,067
1955.....	4,002	18,419,006	3,995	22,227,295	7,997	40,646,301
1956.....	4,133	21,286,036	4,076	23,833,003	8,209	45,119,042
1957.....	4,495	25,429,843	4,084	24,272,357	8,579	49,702,200

Subsection 4.—Aids to Navigation

Included under aids to navigation are the lighthouses and the whole system of marine danger signals on the East and West Coasts of Canada, on Hudson Bay and Strait, the St. Lawrence River and Gulf, the inland rivers and lakes, and at the entrances to harbours—a very extensive system designed to provide safe navigation in all Canadian waters. In

addition, a pilotage service is maintained in waters where navigation is difficult; this service is described under Marine Services at p. 859. A further aid to safe navigation is found in the chains of radio signal and direction-finding stations described under Radio Services at p. 896. Lists of aids to navigation, with the exception of very minor ones, are published by the Department of Transport.

17.—Marine Danger Signals maintained in Canada, Years Ended Mar. 31, 1952-57

NOTE.—In addition to the aids to navigation listed, approximately 9,300 unlighted buoys, balises, dolphins and beacons are maintained. Lists of marine danger signals maintained from 1929 are given in the corresponding table of previous Year Books beginning with the 1941 edition.

Type of Signal	1952	1953	1954	1955	1956	1957
	No.	No.	No.	No.	No.	No.
Lights.....	2,861	2,901	2,876	3,003	3,044	3,082
Lightships.....	8	7	6	7	6	4
Light-keepers.....	1,131	1,154	1,083	1,084	1,003	1,014
Fog whistles.....	23	24	18	19	19	18
Sirens.....	3	3	4	5	5	4
Diaphones.....	213	216	211	235	242	246
Fog bells.....	46	46	49	54	54	47
Hand fog horns.....	127	124	122	127	124	122
Hand fog bells.....	12	12	12	12	13	12
Lighted and combination lighted whistling and bell buoys.....	681	719	778	946	975	1,020
Whistling buoys.....	37	37	36	32	32	33
Bell buoys.....	113	112	115	117	115	113
Fog guns and bombs.....	9	8	9	7	7	7
Fog alarm stations only.....	15	15	15	17	17	17

Navigable waters have been improved greatly by dredging in channels and harbours, by the removal of obstructions, and by the building of remedial works to maintain or control water levels. Incidental to these developments of navigable waters are works to guard shorelines and prevent erosion, and for the control of roads and bridges that cross navigable channels. Ice-breaking operations are carried on at the beginning and at the end of winter to prolong the season of navigation in important waters that freeze over—particularly in connection with sea-going shipping from Montreal—and to prevent flood conditions during the spring ice break-up.

St. Lawrence River Ship Channel.—This channel extends from about 40 miles below Quebec City to the foot of Lachine Canal at Montreal, a distance of 200 miles. About 113 miles of this distance is dredged channel.

Above Quebec the channel has a limiting depth of 35 feet at extreme low water and a minimum width of 550 feet, with additional width up to 1,500 feet at all curves, and difficult points, and additional anchorage and turning areas. This section comprises about 100 miles of dredged channel. Below Quebec the limiting depth of dredged channel, about 13 miles in length, is 30 feet at low tide, with a width of 1,000 feet. An average tidal range of 15 feet in this area provides ample depth for any vessel using the St. Lawrence route. Maintenance requirements owing to silting in this dredged channel are relatively minor above Quebec but below the city silting is more pronounced because of tidal action.

The ship channel is well defined by buoys and the centre marked by range lights, permitting uninterrupted day and night navigation throughout the open season from about mid-April to early December. The movements of all shipping, weather and ice conditions and obstructions to traffic throughout the St. Lawrence waterway from Fame Point, Que., to Kingston, Ont., are recorded and made available to all concerned through a series of reporting stations known as the Marine Reporting Service.

A fleet of ice-breaking vessels is maintained to facilitate the movement of shipping between Montreal and the sea during the opening and closing of navigation, and to alleviate flood conditions in low-lying areas.

18.—Seasons of Open Navigation on the St. Lawrence Ship Channel 1938-57

NOTE.—Figures from 1882 are given in the corresponding table of previous Year Books beginning with the 1934-35 edition.

Year	Channel Open, Quebec to Montreal ¹	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour	Year	Channel Open, Quebec to Montreal ¹	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour
1938.....	Apr. 12	Apr. 18	Dec. 4	1948.....	Apr. 10	Apr. 19	Dec. 10
1939.....	" 29	" 29	" 12	1949.....	" 7	" 7	" 15
1940.....	" 23	" 24	" 5	1950.....	" 18	" 18	" 7
1941.....	" 14	" 19	" 17	1951.....	" 11	" 13	" 13
1942.....	" 17	May 2	" 16	1952.....	" 12	" 13	" 10
1943.....	" 29	" 24	" 13	1953.....	Mar. 30	" 2	" 21
1944.....	" 20	Apr. 21	" 9	1954.....	Apr. 15	Mar. 30	" 15
1945.....	" 1	" 9	" 3	1955.....	" 17	Apr. 5	" 15
1946.....	" 1	" 12	" 18	1956.....	" 13	" 2	" 17
1947.....	" 16	" 19	" 5	1957.....	" 8	" 4	" 18

¹ "Channel Open" means the route can be navigated although there may be floating ice in the river.

Subsection 5.—Marine Services of the Federal Government

The services covered in this Subsection deal with steamship inspection, pilotage service, sea-faring personnel and the operations of the Canadian National (West Indies) Steamships Limited.

Steamship Inspection.—The Steamship Inspection Service, provided for under Part VII of the Canada Shipping Act, is responsible for the administration and carrying out of the provisions of the Act respecting the periodic inspection of power-driven ships and the issue of inspection certificates; the assignment of load lines; the conditions under which dangerous goods may be carried in ships; the protection against accident of workers employed in loading and unloading ships; the prevention from pollution of Canadian territorial and inland waters by oil from ships; and also for the administration and carrying out of the provisions relating to the certification and employment of marine engineers. The Service has a headquarters staff at Ottawa and staffs of inspectors at the principal ocean and inland ports.

The Board of Steamship Inspection decides on questions arising out of the administration of the Act and takes care of the interests of the Federal Government in schools for marine engineers.

19.—Summary Statistics of Steamship Inspection, Year Ended Mar. 31, 1956

Port	Vessels Subject to Inspection when in Commission		Vessels Inspected				Vessels Not Inspected	
			Registered or Owned in Canada		Registered or Owned Elsewhere			
			No.	gross tonnage	No.	gross tonnage		
St. John's, Nfld.....	91	14,036	91	14,036	—	—	—	—
North Sydney, N.S.....	43	14,093	37	12,408	3	1,096	3	589
Halifax, N.S.....	448	132,457	196	126,357	—	—	252	6,100
Saint John, N.B.....	60	114,046	42	11,362	17	102,641	1	43
Quebec, Que.....	334	91,384	158	84,163	1	387	175	6,834
Sorel, Que.....	88	44,539	66	36,695	—	—	22	7,844
Montreal, Que.....	141	174,538	116	172,967	—	—	25	1,571
Kingston, Ont.....	98	151,012	98	151,012	—	—	—	—
Toronto, Ont.....	177	395,195	171	387,154	—	—	6	8,041
St. Catharines, Ont.....	60	186,691	60	186,691	—	—	—	—
Collingwood, Ont.....	60	89,811	56	83,000	—	—	4	6,811
Midland, Ont.....	85	149,309	74	148,613	—	—	11	696
Port Arthur, Ont.....	133	29,324	51	20,540	—	—	82	8,784
Vancouver, B.C.....	411	103,622	371	83,118	1	7,459	39	13,045
Victoria, B.C.....	82	73,166	69	70,613	—	—	13	2,553
Totals.....	2,311	1,763,223	1,656	1,588,729	22	111,583	633	62,911

Pilotage.—Pilotage service functions under the provisions of Part VI of the Canada Shipping Act. Wherever a pilotage district has been created by the Governor in Council, qualified pilots are licensed by the pilotage authority of the district. There are in Canada 42 pilotage districts in nine of which the Minister of Transport is the pilotage authority (see Table 20); in each of the other districts the authority is a local body appointed by the Governor in Council.

20.—Pilotage Service by Districts, Years Ended Mar. 31, 1955 and 1956

District	1955		1956	
	Ships	Net Registered Tonnage	Ships	Net Registered Tonnage
	No.		No.	
Bras d'Or Lake, N.S.	122	338,690	96	257,535
Sydney, N.S.	2,325	3,696,995	2,396	4,152,753
Halifax, N.S.	3,091	11,741,065	3,416	13,689,367
Saint John, N.B.	1,275	3,762,258	1,445	4,048,713
Quebec, Que.	5,017	18,792,633	5,379	21,315,061
Montreal, Que.	8,935	19,776,024	10,632	24,895,502
St. Lawrence-Kingston-Ottawa, Ont.	—	—	—	—
Churchill, Man.	53	149,222	66	160,287
British Columbia	4,526	18,974,565	4,764	20,832,690
Totals	25,344	77,231,452	28,194	89,351,908

In addition there are 21 districts in Newfoundland under local pilotage authority. These districts are administered under Newfoundland statutes which, since the date of union with Canada (Mar. 31, 1949), come under federal jurisdiction. Part VI of the Canada Shipping Act with respect to pilotage has not been proclaimed in force in Newfoundland.

Seamen Engaged and Discharged.—Seamen engaged and discharged at Canadian ports under the provisions of the Canada Shipping Act during the years ended Mar. 31, 1947-56 are shown in Table 21.

21.—Seamen Engaged and Discharged at Canadian Ports, Years Ended Mar. 31, 1947-56

NOTE.—Figures from 1918 are given in the corresponding table of previous Year Books beginning with the 1941 edition.

Year	Seamen Engaged	Seamen Discharged	Year	Seamen Engaged	Seamen Discharged
	No.	No.		No.	No.
1947.....	43,973	42,205	1952.....	43,724	40,664
1948.....	59,768	60,793	1953.....	42,723	36,610
1949 ¹	50,379	49,544	1954.....	42,837	43,142
1950.....	43,677	43,194	1955.....	43,292	41,030
1951.....	40,241	40,535	1956.....	44,142	44,333

¹ Newfoundland included from Apr. 1, 1949.

Canadian National (West Indies) Steamships Limited.—In conformity with the Canada-West Indies Trade Agreement of 1926 (16-17 Geo. V, c. 16) the Federal Government has provided direct steamship services to the West Indies through the medium of Canadian National (West Indies) Steamships Limited.

At the end of 1956, the Canadian National Steamships owned and operated eight vessels in service between Canada and the British West Indies.

22.—Financial Statistics of Canadian National (West Indies) Steamships Limited 1947-56

NOTE.—Figures for the years 1929-38 are given in the 1942 Year Book, p. 620; for 1939-44 in the 1950 edition, p. 777; and for 1945-46 in the 1956 Year Book, p. 844.

Year	Operating Revenues	Operating Expenses	Operating Profit or Loss	Other Income—(net)	Interest	Income Surplus or Deficit
	\$	\$	\$	\$	\$	\$
1947.....	7,857,471	7,028,193	+829,278	266,697	573,298	+522,677
1948.....	7,964,720	7,320,615	+644,105	85,733	563,794	+166,044
1949.....	6,595,007	6,582,608	+12,399	88,064	560,961	+460,498
1950.....	5,124,200	5,725,632	-601,432	133,127	560,462	-1,028,767
1951.....	6,808,478	6,840,054	-31,576	130,368	565,784	-466,992
1952.....	7,449,247	7,122,971	+326,276	145,065	475,250	-3,909
1953.....	4,509,342	5,331,788	-822,446	170,866	475,250	-1,126,830
1954.....	5,105,082	5,424,983	-319,901	166,741	475,250	-628,410
1955.....	5,916,605	5,995,684	-49,079	77,780	124,665	-95,964
1956.....	6,125,470	6,052,570	+72,900	—	49,619	+23,281

Subsection 6.—The St. Lawrence Seaway

The St. Lawrence Seaway, in its broadest sense, will provide a deep waterway extending some 2,200 miles from the Atlantic Ocean to the Head of the Great Lakes. The waters of Lake Superior, seeking sea level, drop 602 feet through the lesser Great Lakes and the St. Lawrence River on their way from the heart of the Continent to the Atlantic Ocean. The greater part of this drop takes place in the Niagara River—now overcome by the 27-mile Welland Ship Canal with its eight locks—and in the St. Lawrence River.

The present navigation picture is as follows: (1) from the Gulf of St. Lawrence to Montreal, a distance of 1,000 miles, controlling navigation channels are 35 feet in depth; (2) from Montreal to Lake Ontario, a distance of 180 miles, controlling navigation

channels are 14 feet in depth; (3) from Lake Ontario to Lake Erie, a distance of 27 miles, controlling navigation channels are 25 feet deep; and (4) from Lake Erie to the Head of the Lakes, a distance of 970 miles, controlling navigation channels are 25 feet downbound and 21 feet upbound. Thus, between the highly developed Great Lakes section, which has a minimum channel of 21 feet, and the ocean port facilities at Montreal lie 114 miles of rapid-studded St. Lawrence River, navigable only through a chain of outmoded 14-foot canals capable of handling ships with a maximum capacity of 3,000 tons only. The Seaway project will break this bottleneck and extend 27-foot facilities from the Great Lakes to the sea. Seven new locks are required for the purpose—five being built by the St. Lawrence Seaway Authority of Canada and two by the St. Lawrence Seaway Development Corporation of the United States. These will replace 21 inadequate locks between Montreal and Lake Ontario.

Also, because Canadian Government regulations require that all bridges spanning waters navigable by ocean-going ships have a minimum overhead clearance of 120 feet, extensive modifications must be made to seven bridges that exist between Montreal and Lake St. Francis. In addition, a new high-level suspension bridge is being constructed across the south channel of the St. Lawrence River at Cornwall Island—the substructure by the Canadian Authority and the superstructure by the United States entity.

Associated with the St. Lawrence Seaway navigation project is the construction of a large electric power development in the international rapids section of the St. Lawrence River between Cornwall and Prescott. A 38,000-acre power pool will be formed by means of control dams and an international powerhouse will generate about 2,200,000 h.p. of electric energy to be shared equally by Canada and the United States. (See pp. 582-583.)

The Seaway navigation project was 75 p.c. complete at the end of 1957. The most significant event in the progress of construction up to that date was the final test, on Nov. 27, 1957, of the Iroquois Lock, the most westerly of the seven new locks. Progressively, the lock gates, fenders, other machinery and controls were installed and tested and the lock was completed by late August, three months ahead of schedule. On the day of the final test, a ship was sailed into the lock, the lock chamber filled and the ship lifted some 12 feet to the present level of the St. Lawrence River above the lock and the nearby Iroquois control dam. The Iroquois Lock will provide access for ships passing from that part of the Seaway channel being dredged (from Lake Ontario down through the Thousand Islands) to the Seaway Lake downstream. The Lake, or power pool, is being created by the Iroquois control dam, and by the Long Sault control dam and the Cornwall-Barnhart Island powerhouse about 35 miles downstream. The Iroquois Lock will be in use sometime in 1958 as will the two United States locks near Massena, N.Y., opposite Cornwall.

The concrete structure of the St. Lambert Lock near Montreal, which is the first lock of the Seaway from seaward, was completed by the end of 1957, and the Lower Beauharnois Lock at the head of Lake St. Louis during the early months of 1958. The other two Canadian locks—Côte Ste. Catherine near the Lachine Rapids and the Upper Beauharnois Lock—are scheduled for completion later in 1958. The completed Seaway will be open to navigation in the spring of 1959.

An event of interest in connection with the bridge-raising projects took place on Oct. 20, 1957. The 250-foot trans-channel span of the Jacques Cartier Bridge, near Montreal, was raised to provide the required 120-foot clearance over the Seaway channel. In the early hours of a Sunday morning, when traffic was light, hydraulic jacks moved the old span horizontally to falsework erected downstream and then moved the new span, resting on falsework upstream, into place. The work was completed in four hours.

Channel dredging taking place in Montreal Harbour, Lake St. Louis, Lake St. Francis, in the channels at Cornwall Island and in the Thousand Islands section, and in the Welland Ship Canal was proceeding on schedule at the end of 1957.

At the height of the summer construction season in 1957, more than 6,000 men were employed on the Canadian navigation facilities and about 2,000 men on the United States navigation project. The two power bodies—The Hydro-Electric Power Commission of Ontario and the Power Authority of the State of New York—employed a work force of about 10,000.

The estimated cost of the whole Seaway project is \$1,025,000,000, divided as follows: the St. Lawrence Seaway Authority, \$285,000,000; the St. Lawrence Seaway Development Corporation \$140,000,000; The Hydro-Electric Power Commission of Ontario, \$300,000,000; and the Power Authority, State of New York, \$300,000,000. By the end of 1957, the St. Lawrence Seaway Authority had awarded contracts valued at approximately \$235,000,000.

The Seaway is a self-liquidating project and costs of construction and operation are to be recovered from tolls on shipping. Tolls committees of both Canada and the United States are of the opinion that a composite toll system would present advantages for both the Seaway and its users. This system calls for two parallel tolls: a lower toll on net registered tonnage of each ship whether loaded or in ballast; and a higher toll based on the actual tonnage of cargo in each ship.

The Canadian and United States entities have come to the conclusion that ships having an over-all length of not over 730 feet and a beam of up to 75 feet can be accommodated in the Seaway, subject to the proviso that vessels exceeding 715 feet in length or 72 feet in beam should be classified in the category of vessels having characteristics which will subject them to appropriate scheduling and handling so as not to interfere with other traffic whenever the transit of such vessels is unduly delaying other shipping. They believe such an arrangement will be in the best interest of the Seaway and of its traffic.

Section 2.—Financial Statistics of Waterways

The principal statistics available on the cost of facilities for water-borne traffic consist of the record of public expenditure on waterways. Such expenditure may be classified as capital expenditure, or investment and expenditure for maintenance and operation. Revenue from operation is also recorded. The major part of the capital expenditure for the permanent improvement of waterways is provided by the Federal Government. Capital expenditure by municipalities and private capital expenditure is confined almost entirely to terminal or dockage facilities. On the other hand, investment in shipping has come almost entirely from private sources. No figures are available regarding private investment in shipping except those appearing in the reports of the operating companies that cover only a portion of the field. There are no statistics showing the revenue of ship operators from passenger and freight traffic.

Capital Expenditure.—The only figures available of federal capital expenditure on Canadian waterways are those compiled from the *Public Accounts* and the annual reports of the Departments of Transport, Public Works and Finance. It must be realized that such expenditure cannot be regarded as any indication of the present worth of the undertakings represented. The cost of building canals and other waterways and permanent works to facilitate water transportation in Canada is represented in such reports at their original book values, no deductions having been made from the cumulative totals for depreciation from year to year or for abandonment of works that have been superseded such as, for instance, the first Welland Canals. To this extent such figures are an overstatement of the present value of the works in use. The figures are further limited by the fact that they do not include the cost of maintenance and improvements or the operation of these works, such charges having been made to the consolidated deficit account as annual expenditure and not to capital account. Table 23 shows that capital expenditure on canals, marine services and miscellaneous water-transport facilities reached the grand total of \$435,000,000 by the end of March 1956, but this must be interpreted

with the above qualifications in mind. In Table 24 the capital values of the fixed assets administered by the National Harbours Board are shown as at Dec. 31, 1955 and 1956, and are additional to the capital expenditure of Table 23. Figures in Table 24 reflect the capital situation in regard to the national harbours of Canada far better than do those of Table 23 for waterways and facilities, inasmuch as they include all buildings, machinery and durable plant improvements; they also have been subject to deductions for depreciation and the scrapping or abandonment of plant and therefore more nearly approach the present value of the properties under the administration of the National Harbours Board.

23.—Capital Expenditure of the Federal Government on Canals, Marine Services and Miscellaneous Water Transport Facilities as at Mar. 31, 1955 and 1956

NOTE.—Compiled from annual reports of the Department of Transport and the *Public Accounts*.

Item	Expenditure			Item	Expenditure		
	Years ended Mar. 31—		Total to Mar. 31, 1956		Years ended Mar. 31—		Total to Mar. 31, 1956
	1955	1956			1955	1956	
	\$	\$	\$		\$	\$	\$
Canals				Miscellaneous Facilities			
Quebec Canals—				Bare Point breakwater	—	—	217,996
Beauharnois (old)....	Cr. 15,842	Cr. 473	1,606,104	Burlington Bay Canal.	—	—	308,328
Carillon and Grenville	—	—	4,191,727	Burlington Channel im-	—	—	1,392,490
Chambly	—	—	780,620	provements.....	—	—	—
(Richelieu R.).....	—	—	13,211,871	Cape Tormentine Har-	—	—	95,000
Lachine.....	Cr. 19,737	Cr. 346,483	75,907	bour.....	—	—	7,799,761
Lake St. Francis.....	—	—	298,176	Esquimalt graving	—	—	—
Lake St. Louis.....	—	—	7,897,119	dock.....	—	—	918,797
Soulanges.....	—	—	1,320,216	Georgian Bay to Mont-	—	—	86,512
Ste. Anne.....	—	—	735,964	real waterway survey	—	—	556,559
St. Ours.....	—	—	—	Halifax elevator site... Kingston graving dock	—	—	1,164,235
Ontario - St. Lawrence				Lake St. Peter.....	—	—	971,593
Canals—				Lévis graving dock....	—	—	1,103,812
Cornwall.....	—	—	7,233,823	Miscellaneous wharves.	97,883	—	—
Williamsburg.....	—	—	1,334,552	Port Arthur, Fort Wil-	—	—	16,249,020
Farran's Point.....	—	—	877,090	liam and River Kam-	—	—	904,459
Rapide Plat.....	—	—	2,159,881	istikwia improve-	—	—	134
Galop.....	—	—	6,143,468	ments.....	—	—	1,806,541
Galop Channel.....	—	—	1,039,896	Port Colborne Harbour	—	—	—
North Channel.....	—	—	1,995,143	Rainy River Lock and	—	—	—
River Reaches.....	—	—	483,830	Dam.....	—	—	—
St. Peters, N.S.....	—	—	648,547	Sorel Harbour improve-	—	—	—
Culbute Lock and Dam	—	—	—	ments.....	—	—	—
(Ottawa R.).....	—	Cr. 382,391	—	St. Andrews Rapids	—	—	—
Rideau.....	Cr. 370	Cr. 60	4,213,531	and Red River im-	—	—	—
Tay.....	—	—	489,599	provements.....	—	—	1,569,777
St. Lawrence Ship	—	—	133,897	Tiffin Harbour im-	—	—	—
(Surveys).....	—	—	4,935,809	provements.....	—	—	481,622
Sault Ste. Marie.....	—	—	19,947,201	Toronto Harbour im-	—	—	9,331,987
Trent.....	Cr. 1	Cr. 1,450	1,248,947	provements.....	—	—	—
Murray.....	—	—	131,690,842	Victoria, B.C., Har-	—	—	2,334,089
Welland Ship Canal....	Cr. 34,803	Cr. 47,159	27,242,269	bour improvements.	—	—	—
Prior Welland Canals.	Cr. 168	Cr. 5,110	34,967	Victoria, Ont., Harbou	—	—	761,802
Canals generally.....	—	—	165,361	improvements.....	—	—	—
Adjustment suspense...	—	—	—				
Totals, Canals.....	Cr. 70,921	Cr. 783,126	242,136,357	Totals, Miscellaneous	97,883	—	48,522,642
Marine Services				Summary			
Marine Service steam-	1,999,177	676,831	27,849,191	Canals.....	Cr. 70,921	Cr. 783,126	242,136,357
River St. Lawrence	—	—	—	Marine Services.....	6,028,538	3,714,768	144,465,873
Ship Channel — con-	4,029,361	3,037,937	116,616,682	Miscellaneous facilities.	97,883	—	48,522,642
tract dredging.....	—	—	—				
Totals, Marine Ser-	6,028,538	3,714,768	144,465,873	Grand Totals.....	6,055,500	2,931,642	435,124,872
vices.....							

24.—Capital Values of Fixed Assets administered by the National Harbours Board as at Dec. 31, 1955 and 1956

NOTE.—Compiled from the annual reports of the National Harbours Board.

Item	1955	1956	Item	1955	1956
	\$	\$		\$	\$
Harbour dredging.....	12,212,253	12,206,828	Central heating plants.....	126,383	126,383
Real estate.....	12,400,783	12,534,818	Harbour shops.....	309,983	316,861
Vehicular bridges.....	201,976	201,976	Electric power systems....	1,392,507	2,202,272
Roads, fences and boundaries.....	2,188,576	2,227,882	Water supply systems.....	1,027,504	1,047,032
Sewers and drains.....	830,429	830,429	Floating equipment.....	2,191,457	2,064,192
Miscellaneous structures....	737,192	723,278	Shore equipment.....	937,454	1,062,165
Wharves and piers.....	97,804,794	99,550,650	Miscellaneous small plant..	683,126	611,610
Permanent sheds.....	27,779,953	28,466,364	Engineering — general surveys.....	109,441	119,441
Shed hoists and electrical cranes.....	406,545	406,545	Works under construction..	3,232,852	11,563,048
Railway systems.....	6,695,552	6,616,470	Sundry expenditure—undistributed.....	3,769,450	4,339,129
Grain elevator systems....	47,731,085	47,081,799	Bridge construction, right-of-way, etc.....	18,611,649	19,459,525
Cold storage systems.....	6,144,129	6,147,128			
Office furniture and appliances.....	239,059	248,985			
Harbour buildings.....	2,491,375	2,431,398	Totals.....	259,255,507	252,586,208

25.—Amounts Advanced by the Federal Government to the National Harbours Board for Capital Expenditure 1954-56

NOTE.—Compiled from the annual reports of the National Harbours Board.

Harbours and Properties	1954	1955	1956	Harbours and Properties	1954	1955	1956
	\$	\$	\$		\$	\$	\$
Halifax.....	859,767	955,329	2,225,893	Prescott elevator.....	—	5,640	51,995
Saint John.....	1,384,253	519,338	651,168	Port Colborne elevator..	27,625	2,047	79,955
Chicoutimi.....	—	—	10,000	Churchill.....	767,834	1,174,538	39,365
Quebec.....	802,273	324,707	1,226,388	Vancouver.....	258,090	19,846	139,895
Three Rivers.....	348,405	16,850	26,983				
Montreal.....	3,380,559	1,363,999	7,292,150	Totals.....	7,828,816	4,382,309	11,743,792

Waterway Expenditure and Revenue on Consolidated Fund Account.—

Expenditure under this heading (Tables 26 to 28) is mainly for the operation and maintenance of various facilities for water transport but, unfortunately, the line between operation and maintenance expenditure is not as finely drawn as is desirable. Revenue in connection with waterways of the Department of Transport and the Department of Public Works is shown in Table 29.

To facilitate water transportation, the Federal Government expends annually, in addition to the recurrent expenditure shown here, a considerable amount to cover deficits of the Canadian National (West Indies) Steamships Limited and of the National Harbours Board and for mail subsidies and steamship subventions as shown in Table 31. Operating expenditure and revenue of facilities administered by the National Harbours Board are shown separately in Table 30.

26.—Expenditure on Canals Charged to Consolidated Deficit Account, Years Ended Mar. 31, 1954-56

NOTE.—Compiled from the annual reports of the Department of Transport.

Canal	1954	1955	1956
EXPENDITURE ON IMPROVEMENTS			
	\$	\$	\$
Main Canals—			
Quebec Canals—			
Beauharnois (old).....	39,997	2,873	2,606
Hungry Bay Dyke.....	—	—	—
Lachine.....	1,659,624	482,758	684,533
Lake St. Francis.....	—	—	—
Quebec dredging fleet.....	8,975	800	930
Soulanges.....	34,657	33,894	50,593
Superintending engineer.....	—	—	—
Ontario-St. Lawrence Canals—			
Cornwall.....	146,231	185,607	97,063
Williamsburg.....	159,715	79,267	243,618
Welland Canals—			
Welland Ship.....	386,432	487,384	431,189
Prior Welland Canal.....	—	—	—
Sault Ste. Marie.....	22,957	47,695	239,113
Secondary Canals—			
Carillon and Grenville, Que.....	96,794	37,787	85,061
Chambly (Richelieu R.), Que.....	13,452	16,503	25,574
Rideau and Tay, Ont.....	34,330	95,605	67,935
Ste. Anne, Que.....	1,585	3,664	2,557
St. Ours (Richelieu R.), Que.....	113	4,772	11,384
St. Peters, N.S.....	—	—	129,538
Canso, N.S.....	—	—	4,291
Trent, Ont.....	144,365	296,315	232,417
Murray, Ont.....	18,472	2,039	17,679
Totals.....	2,767,699	1,776,963	2,326,081
EXPENDITURE ON OPERATION AND MAINTENANCE			
	\$	\$	\$
Administration, Ottawa.....	117,065	140,894	125,230
Quebec Canals—			
Head Office.....	73,591	68,121	63,850
Beauharnois (old).....	6,899	6,999	7,432
Carillon and Grenville.....	138,252	143,326	137,085
Chambly (Richelieu R.).....	191,712	207,828	212,962
Hungry Bay and Ste. Barbe Dykes.....	5,638	4,463	5,279
Lachine.....	839,507	867,568	917,245
Quebec dredging fleet.....	31,071	25,773	25,800
Soulanges.....	441,797	470,310	472,864
Ste. Anne.....	24,409	26,811	29,259
St. Ours (Richelieu R.).....	35,639	31,192	31,616
Ontario-St. Lawrence Canals—			
Head Office.....	108,126	215,049	119,165
Cornwall.....	535,878	548,966	529,509
Williamsburg.....	291,775	293,682	278,090
Canso, N.S.....	—	—	22,181
St. Peters, N.S.....	42,133	47,977	46,027
Rideau and Tay, Ont.....	426,802	452,489	465,139
Sault Ste. Marie, Ont.....	176,014	196,522	195,043

26.—Expenditure on Canals Charged to Consolidated Deficit Account, Years Ended Mar. 31, 1954-1956—concluded

Canal	1954	1955	1956
	EXPENDITURE ON OPERATION AND MAINTENANCE—concluded		
	\$	\$	\$
Trent, Ont.	469,835	494,347	507,129
Murray, Ont.	29,291	31,132	34,395
Welland, Ont.	1,646,445	1,743,338	1,760,344
St. Lawrence Ship Canal surveys, etc.	596,765	Cr. 1,352,589	—
Totals	6,228,644	4,664,198	5,985,644

27.—Marine Service Expenditure Charged to Consolidated Deficit Account, Years Ended Mar. 31, 1955 and 1956

NOTE.—Compiled from annual reports of the Department of Transport.

Marine Services	1955	1956	Marine Services	1955	1956
	\$	\$		\$	\$
Marine Services—			Steamship Inspection	627,133	704,017
Administration, including			Marine Service Steamers—		
Agencies	627,692	645,728	Administration, operation		
Aids to navigation (construction, maintenance and supervision)	5,788,506	5,990,819	and maintenance	6,175,123	6,768,318
Nautical Services—			Marine Signal Service	157,709	117,821
Administration, operation			River St. Lawrence Ship		
and maintenance, including			Channel Service—		
grants	502,527	455,505	Administration, operation		
Construction	40,327	—	and maintenance	757,675	747,645
Pilotage Service—			Surveys and investigations ..	25,039	—
Administration	526,098	613,599	Totals	15,267,035	16,073,285
Construction	37,406	28,033			
Pensions to former pilots	1,800	1,800			

28.—Expenditure on Waterways (Harbours, Rivers, Roads and Bridges) Charged to Consolidated Fund Account by Department of Public Works, Years Ended Mar. 31, 1955

NOTE.—Compiled from the annual reports of the Departments concerned by the Comptroller of the Treasury, Department of Finance. Excludes expenditures on harbours administered by the National Harbours Board as shown in Table 30.

Province or Territory	Dredging ¹	Con- struction	Improvements and Repairs	Staff and Sundries	Total
	\$	\$	\$	\$	\$
Newfoundland	600,827	857,882	454,514	221,785	2,135,008
Prince Edward Island	439,762	623,906	156,529	100,754	1,320,951
Nova Scotia	1,271,640	3,253,684	600,135	511,505	5,636,964
New Brunswick	433,199	587,206	235,644	423,114	1,679,163
Quebec	731,376	3,665,407	679,651	600,198	5,676,632
Ontario	1,486,128	3,701,059	466,036	423,730	6,076,953
Manitoba	193,766	75,895	54,359	116,187	440,207
Saskatchewan	—	40,817	856	1,613	43,286
Alberta	65,583	15,624	4,464	95,940	181,611
British Columbia	1,682,761	2,300,333	461,600	1,159,975	5,604,669
Yukon and Northwest Territories	72,290	110,467	32,932	3,329	219,018
Totals	6,977,332	15,232,280	3,146,720	3,658,130	29,014,462

¹ Expenditure for dredging plants has been included in dredging column for each province.

29.—Revenue of the Federal Government in Connection with Waterways, Years Ended Mar. 31, 1955 and 1956

NOTE.—Compiled from annual reports of the Department of Transport.

Item	1955	1956	Item	1955	1956
\$	\$		\$	\$	
Department of Transport			MARINE SERVICES—concluded		
CANAL SERVICES			Miscellaneous.....	19,246	25,061
Lachine.....	351,562	359,876	Refunds previous year's expenditure.....	26,763	81,596
Soulanges.....	3,987	2,174	TOTALS, MARINE SERVICES.....	692,622	926,890
Chambly.....	4,297	5,135	BOARD OF TRANSPORT COMMISSIONERS		
St. Anne.....	269	279	Licences to ships.....	1,911	1,896
St. Ours.....	395	429	Sale of publications.....	523	726
Carillon and Grenville.....	866	1,287	Refunds of previous year's expenditure.....	38	9
Beauharnois.....	49,265	49,016	TOTALS, BOARD OF TRANSPORT COMMISSIONERS.....	2,472	2,631
Cornwall.....	58,453	50,579	Totals, Department of Transport.....	2,223,502	2,692,395
St. Lawrence Waterways-Cornwall area.....	—	3,343	Department of Public Works		
Williamsburg.....	12,600	13,082	EARNINGS OF DRY DOCKS		
St. Peters.....	703	692	Champlain Dock, Lauzon.....	49,372	76,450
Canso.....	—	20	Lorne Dock, Lauzon.....	39,260	27,615
Welland.....	833,302	1,085,532	Esquimalt new dock.....	119,227	200,245
Sault Ste. Marie.....	3,218	3,647	Selkirk repair slip.....	2,406	1,440
Rideau and Tay.....	18,830	19,798	TOTALS, EARNINGS.....	210,265	305,750
Trent.....	94,602	96,886	WORKS AND PLANTS LEASED		
Murray.....	917	1,220	Kingston dry dock.....	24,200	12,100
Sale of publications.....	156	2	Ferry privileges.....	414	359
Interest on loan to City of Montreal (St. Remi Tunnel).....	43,713	42,813	Dredges and plants.....	50,257	70,684
Miscellaneous.....	53	20	TOTALS, LEASED.....	74,871	83,143
Refunds of previous year's expenditure.....	51,220	27,044	Rents from water lots, etc.....	20,029	47,167
TOTALS, CANAL SERVICES.....	1,528,408	1,762,874	Refunds against expenditure reported in previous years.....	80,784	80,468
MARINE SERVICES			Sundry receipts.....	9,868	9,587
Fines and forfeitures.....	11,258	5,513	Totals, Dept. of Public Works.....	395,817	526,115
Steamship inspection.....	165,375	160,920			
Wharf revenue.....	312,817	432,487			
Harbour dues.....	78,679	147,843			
Measuring surveyor's fees.....	356	396			
Examinations — masters' and mates' fees.....	7,036	6,806			
Pilots' licence fees (pilotage).....	366	251			
Pilotage dues.....	9,771	12,859			
Shipping fees.....	4,044	4,142			
Marine steamer earnings.....	10,408	20,335			
Signal station dues.....	1,450	1,513			
Rentals—water lots and light-house sites.....	31,651	24,257			
Sale of land, buildings, etc.....	11,820	1,312			
Merchant seamen's identity certificates.....	1,582	1,599			

30.—Operating Revenue and Expenditure of Harbours, Elevators and Bridges under the National Harbours Board 1954-56

Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income	Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income
\$	\$	\$		\$	\$	\$	
Halifax—				Montreal—			
1954.....	1,665,862	1,208,840	457,022	1954.....	8,166,370	4,609,110	3,557,260
1955.....	1,988,469	1,363,173	625,296	1955.....	8,308,616	4,680,740	3,627,876
1956.....	1,909,248	1,434,250	474,998	1956.....	9,761,604	5,365,474	4,396,130
Saint John—				Three Rivers—			
1954.....	755,026	743,135	11,891	1954.....	344,180	52,668	291,512
1955.....	875,819	845,450	30,369	1955.....	349,418	74,556	274,862
1956.....	965,767	910,423	55,344	1956.....	393,156	179,035	214,121

30.—Operating Revenue and Expenditure of Harbours, Elevators and Bridges under the National Harbours Board 1954-56—concluded

Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income	Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income
\$	\$	\$			\$	\$	\$
Port Colborne Elevator—				Jacques Cartier Bridge (Montreal)			
1954.....	799,384	493,400	305,984	1954.....	1,811,523	220,917	1,590,606
1955.....	766,666	496,958	269,708	1955.....	2,100,393	253,000	1,837,393
1956.....	869,683	588,078	281,605	1956.....	2,154,240	278,257	1,875,983
Prescott Elevator—				Churchill—			
1954.....	1,035,271	397,744	637,527	1954.....	732,762	623,026	109,736
1955.....	995,449	430,200	565,249	1955.....	782,726	710,606	72,120
1956.....	1,086,880	488,972	597,908	1956.....	1,074,722	745,554	329,168
Chicoutimi—				Vancouver—			
1954.....	101,304	29,523	71,781	1954.....	3,075,642	1,764,794	1,310,848
1955.....	105,651	33,150	72,501	1955.....	3,002,061	1,824,124	1,177,937
1956.....	110,108	27,944	82,164	1956.....	3,654,085	2,392,875	1,261,210
Quebec—							
1954.....	1,771,347	1,376,327	395,020				
1955.....	1,908,450	1,368,839	540,111				
1956.....	2,078,286	1,955,500	122,786				

Shipping Subsidies.—Table 31 shows the amounts of steamship subventions paid in connection with contracts made under statutory authority for coastal and inland water-shipping services. The payment of these subventions is administered by the Canadian Maritime Commission.

31.—Steamship Subventions, Years Ended Mar. 31, 1956 and 1957

Services	1956	1957
\$	\$	\$
Pacific Coast Services—		
Vancouver and northern ports of British Columbia and Queen Charlotte Islands.....	325,000	562,000
Eastern Services—		
Baddeck and Iona, N.S.....	14,500	15,000
Campobello, N.B., and Lubec, Maine.....	8,600	8,600
Cross Point, Que., and Campbellton, N.B.....	50,000	40,000
Dalhousie, N.B., and Miguasha, Que.....	19,000	19,000
Grand Manan and the mainland, N.B.....	95,000	95,000
Halifax, Canso and Guysborough, N.S.....	23,000	26,000
Halifax, Torbay, Ile Madame and ports on west coast of Cape Breton Island, N.S.....	20,000	23,000
Ile-aux-Coudres and Les Eboulements, Que.....	15,000	15,000
Ile-aux-Grues and Montmagny, Que. (summer).....	2,500	3,300
Ile-aux-Grues and Montmagny, Que. (winter).....	1,700	1,700
Mulgrave and Canso, N.S.....	82,000	54,900
Mulgrave, Queensport and Ile Madame, N.S.....	30,000	30,000
Murray Bay and north shore St. Lawrence, Que. (winter).....	35,000	50,000
Owen Sound and ports on Manitoulin Island and Georgian Bay, Ont.....	76,840	95,255
Pele Island and the mainland, Ont.....	35,000	42,500
Pictou, Mulgrave and Cheticamp, N.S.....	13,500	13,500
Pictou, N.S., Charlottetown, P.E.I., and Magdalen Islands, Que.....	120,000	120,000
Prescott, Ont., and Ogdensburg, N.Y. ¹	8,782	—
Prince Edward Island and Newfoundland.....	—	80,000
Prince Edward Island and Nova Scotia.....	158,000	163,000
Quebec, Natashquan and Harrington, Que., and other ports on the north shore, Gulf of St. Lawrence.....	470,000	470,000
Quebec or Montreal, Gaspé, Que., and Magdalen Islands, calling at way ports.....	156,500	156,500
Rimouski, Matane and ports on the north shore of the St. Lawrence, Que.....	125,500	125,500
Rivière-du-Loup and St. Siméon, Que.....	21,000	21,000
Saint John, N.B., Westport and Yarmouth, N.S., calling at way ports.....	33,000	33,000
Sydney and Bay St. Lawrence, Cape Breton Island, calling at way ports.....	45,000	45,000
Yarmouth, N.S., and Boston, Mass.....	40,923	—
Newfoundland Coastal Steamship Services.....	2,117,847	2,501,038
Totals.....	4,143,192	4,809,793

¹ The annual subsidy for this service is \$15,000 refundable in whole or in part. Full refund was made for the year ended Mar. 31, 1957, as well as full refund of the \$8,782 shown for 1956.

PART V.—CIVIL AIR TRANSPORT*

Section 1.—Administration and Development

Historical Developments.—Canada's aviation history dates back to 1909 when the *Silver Dart*, piloted by Jack McCurdy (Hon. J. A. D. McCurdy, former Lieutenant-Governor of Nova Scotia), flew at Baddeck, N.S. This was the first aeroplane flight by a British subject in the British Empire.

There was little aviation development in Canada until World War I. Following the War, many of Canada's wartime aviators assisted in developing air transportation services into inaccessible areas, air forestry patrols and intercity air services. During this period the flying clubs movement received government assistance in the training of pilots and engineers required by Canada's civil aviation industry.

World War II was a period of intensive construction of airports and aerodromes to meet the requirements for training of airmen under the British Commonwealth Air Training Plan. At the end of the War, many Service-trained Canadian airmen turned to commercial flying and were absorbed by existing operating companies or helped to develop other flying services. Transatlantic air services were inaugurated by the Department of Transport during the War and were turned over to Trans-Canada Air Lines which had come into being by Act of Parliament in 1937 to provide for the development of a government-controlled transcontinental air service for regular scheduled operations. Canadian Pacific Air Lines was created by the amalgamation of small commercial operators for the servicing of Canada's northland. In 1949 the Canadian Pacific Air Lines was designated to provide transpacific services on behalf of Canada. Current operations of TCA and CPA are covered on pp. 870-871.

The Control of Civil Aviation.—The control of civil aviation in Canada is under the jurisdiction of the Federal Government and is administered under the authority of the Aeronautics Act 1919, and amendments thereto. The Aeronautics Act is in three parts. Broadly speaking, Part I deals with the technical side of civil aviation comprising matters of registration of aircraft, licensing of airmen, the establishment and maintenance of airports and facilities for air navigation, air traffic control, accident investigation and the safe operation of aircraft. This Part of the Act is administered by the Director of Civil Aviation under the supervision of the Director General of Air Services, Department of Transport. Part II of the Act deals with the social and economic aspects of commercial air services and assigns to the Air Transport Board certain regulatory functions of commercial air services (see p. 813). Part III deals with matters of government internal administration in connection with the Act.

Weather Services.—Weather services are provided by the Meteorological Branch of the Department of Transport to meet the increasing demands of aviation, agriculture, industry and the general public. The expanding weather services required by the Department of National Defence both in Canada and with Canadian Armed Forces abroad are a major responsibility of the Branch. In 1956 a Central Analysis Office was operated in Montreal together with 51 forecast offices across Canada and four in Europe. Forecast offices are linked by teletype, radio teletype and a national facsimile system. As of July 1, 1956, the Branch maintained 250 synoptic stations taking six-hourly observations, a

* Sections 1 and 2 of this Part were revised in the Department of Transport and Section 3, except where otherwise indicated, in the Transportation Section, Public Finance and Transportation Division, Dominion Bureau of Statistics. For military air transportation, see Chapter XXVIII on Defence of Canada.

network of 31 radiosonde stations (including five in the extreme Arctic operated jointly with the United States) taking upper air soundings, 71 stations recording upper winds and 1,387 climatological stations. One ocean weather station taking weather observations every three hours in the Pacific, 1,000 miles west of Vancouver, is maintained under international agreement.

Air Industries and Transport Association.—Commercial flying schools that are members of the Air Industries and Transport Association numbered 35 at the end of 1955. During 1955 the number of students instructed and graduated as private pilots was 498, the number graduated as commercial pilots was 109, and the number of instructional hours flown was 40,900.

Royal Canadian Flying Clubs.—At the end of 1955 there were 38 flying clubs connected with the Royal Canadian Flying Clubs Association. The total membership was 7,765 and the aircraft available for instructional purposes numbered 143. During the year 1,120 students were instructed and graduated as private pilots and 83 as commercial pilots. Instructional hours of flying totalled 82,596.

International Air Agreements.—The position of Canada in the field of aviation as well as its geographical location makes imperative co-operation with other nations of the world engaged in international civil aviation. Canada took a major part in the original discussions that led to the establishment of the International Civil Aviation Organization (ICAO) which has headquarters at Montreal, Que. A special article on The International Civil Aviation Organization and Canada's Participation Therein appeared in the 1952-53 Year Book, pp. 820-827.

In recent years Canada has been a signatory to agreements concerning civil aviation with Australia, New Zealand, Belgium, Denmark, France, Ireland, Japan, Mexico, the Netherlands, Norway, Peru, Portugal, Sweden, the United Kingdom and the United States.

Section 2.—Air Services

Air Transport Services.—These services are grouped into two broad classes—Scheduled Services and Non-scheduled Services. The first group provides regular point-to-point service on scheduled advertised routes and the second group includes:—

- (1) Specific Point Services from a designated base to specific points on the basis of unit rates that may be undertaken as the traffic warrants and that are not on a time schedule;
- (2) Chartered Services operated on the basis of the private chartering of an entire aircraft for a specific trip;
- (3) Contract Air Services which operate on one or more specific contracts—these do not operate on a time schedule nor need the contractor take the entire space of the aircraft; and
- (4) Specialty Air Services concerned with large-scale forestry and utility surveys according to some specific agreement.

Trans-Canada Air Lines.—During 1956, TCA flew 1,191,784,000 passenger-miles, carrying 2,072,912 passengers. Ton-miles of air freight totalled 11,928,000, air express 2,548,000, and mail 8,613,000. In April 1955, TCA began operation of Viscount aircraft, being the first airline in North America to place turbine-propeller aircraft in service. Orders have been placed for four Douglas DC-8 jet airliners for use on long routes and 20 Vickers Vikings, large propeller-turbine aircraft, for medium-range operations, the objective being an all-turbine powered fleet by 1961.

At the end of 1956, TCA employed 8,788 persons, had a fleet consisting of nine Super Constellations, 18 Viscounts, 21 North Stars and 24 DC-3's, flying 25,187 route-miles and serving more than 60 communities in Canada, as well as points in the United States, the British Isles, France, Germany, Bermuda and the Caribbean Islands.

1.—Passenger, Freight and Mail Traffic of Trans-Canada Air Lines 1947-56

Source: Trans-Canada Air Lines Annual Report.

Year	Revenue Passenger Traffic ¹		Revenue Commodity Traffic ²		Mail Traffic
	No.	passenger-miles	lb.	ton-miles	ton-miles
1947.....	427,967	179,808,562	2,041,315	764,105	1,275,909
1948.....	532,555	249,575,544	4,313,297	1,608,102	2,294,088
1949.....	648,574	310,699,767	5,471,013	2,160,644	3,403,810
1950.....	790,808	379,605,810	9,518,009	3,585,775	3,644,752
1951.....	930,691	450,840,623	10,826,333	3,861,583	3,969,371
1952.....	1,132,518	653,961,415	19,757,969	7,042,427	4,843,052
1953.....	1,307,810	759,319,800	22,996,531	7,947,113	5,373,841
1954.....	1,438,349	852,475,532	24,044,347	10,192,705	6,942,299
1955.....	1,682,195	969,392,395	30,889,383	12,175,433	7,704,144
1956.....	2,072,912	1,191,784,000	35,789,457	14,476,000	8,613,000

¹ Includes non-scheduled service.² Includes excess baggage and express.**2.—Operating Revenue and Expenditure of Trans-Canada Air Lines 1947-56**

SOURCE: Trans-Canada Air Lines Annual Report.

Year	Passenger	Freight ¹	Mail	Operating Revenue ²	Operating Expenditure	Operating Surplus
	\$	\$	\$	\$	\$	\$
1947.....	10,450,524	534,359	3,808,197	15,297,346	16,796,492	-1,499,146
1948.....	14,469,578	888,917	4,648,775	20,866,936	21,624,056	- 757,120
1949.....	19,460,395	1,161,612	5,400,000	26,523,969	27,472,728	- 948,759
1950.....	24,183,501	1,667,827	5,400,000	31,810,684	31,318,613	+ 492,071
1951.....	28,666,505	1,913,703	5,741,000	48,010,301	43,336,120	+4,674,181
1952.....	42,022,616	3,730,521	7,698,641	55,057,708	52,744,741	+2,312,967
1953.....	48,242,942	4,111,456	7,786,119	62,236,564	61,433,700	+ 802,864
1954.....	53,123,868	4,705,513	8,371,344	68,764,252	67,731,512	+1,032,740
1955.....	61,105,243	6,015,910	8,297,605	77,428,254	76,770,922	+ 657,332
1956.....	74,478,516	6,769,395	8,869,934	91,306,046	89,197,115	+2,108,931

¹ Express and excess baggage.² Includes other revenue.

Canadian Pacific Air Lines Limited.—CPA operates scheduled domestic services over 9,354 route-miles. Overseas routes operate from Vancouver to Australia, New Zealand, Honolulu and Fiji on the South Pacific service; the North Pacific serves Tokyo and Hong Kong via the Great Circle route through the Aleutian Islands. In September 1955, CPA took over the Trans-Canada Air Lines Mexico City route and later extended the service to Lima in Peru and Buenos Aires in Argentina. In 1957, the Company launched a new air link between Toronto, Montreal, and Lisbon in Portugal. Flight frequency on CPA's polar route from Vancouver to Amsterdam, inaugurated in 1955, was increased to three a week. In 1956, CPA flew 272,718 revenue passengers a total of 252,645,211 revenue passenger-miles. Revenue cargo amounted to 4,871,657 ton-miles and mail to 2,863,878 lb.

Independent Air Lines.—In addition to Trans-Canada Air Lines and Canadian Pacific Air Lines Limited, there are four other domestic airlines licensed to operate scheduled services in Canada: Trans-Air Limited, Winnipeg, Man.; Maritime Central Airways Limited, Charlottetown, P.E.I.; Pacific Western Airlines Limited, Vancouver, B.C.; and Quebecair Incorporated, Rimouski, Que.

Licensed domestic air carriers operating in Canada held valid operating certificates at Dec. 31, 1956, covering 42 scheduled, 98 flying-training and 658 non-scheduled and specialty services. Non-scheduled services are operated by the majority of the independent airlines. These services provide effective access to sections of Canada that are inaccessible by other means of transportation and act as feeders to the scheduled airlines. They also provide specialty services such as recreational flying, aerial photography and surveying, aerial pest control and aerial advertising.

Commonwealth and Foreign Scheduled Commercial Air Services.—At the end of December 1957, there were 16 Commonwealth and foreign air carriers holding valid Canadian operating certificates and licences covering international scheduled commercial air services operating into Canada, as follows:—

Air France (Compagnie Nationale Air France) operates between points in Metropolitan France and Montreal, Que., Canada, direct or via Shannon, Ireland; Keflavik, Iceland; or the Azores and Gander, Nfld., Canada; and New York, N.Y., and Chicago, Ill., U.S.A.

American Airlines, Inc., operates between Toronto, Ont., Canada, and New York, N.Y./Newark, N. J., U.S.A., direct or via Buffalo, N.Y., U.S.A.

British Overseas Airways Corp., operates between London, England, Gander, Nfld., and Montreal, Que., Canada; and Detroit, Mich., U.S.A.; and between London, England, Montreal, Que., Canada, and Nassau, Bahamas; and between London, England, Gander, Nfld., and Bermuda.

Eastern Air Lines, Inc. operates between the terminals Ottawa, Ont., Canada, and Montreal, Que., Canada, and New York, N.Y., U.S.A., direct or via Burlington, Vt., U.S.A.; and between the terminals Ottawa, Ont., and Montreal, Que., Canada, and Washington, D.C., U.S.A., direct or via Massena/Syracuse, N.Y., U.S.A.

KLM Royal Dutch Airlines operates between the terminals Amsterdam, The Netherlands, and Montreal, Que., Canada; and between the terminals Montreal, Que., Canada, and Willemstad, Curaçao, Netherlands Antilles.

Lufthansa German Airlines operates between points abroad and Montreal, Que., Canada, and Chicago, Ill., U.S.A.

Northeast Airlines, Inc. operates between Montreal, Que., Canada, and Boston, Mass., U.S.A., via Burlington, Vt., Montpelier-Barre, Vt., White River Junction, Vt., (Lebanon Airport, N.H.), and Concord, N.H., U.S.A.

Northwest Airlines, Inc. operates between Winnipeg, Man., Canada, and Fargo, N.D., U.S.A., and between Minneapolis/St. Paul, Minn., U.S.A., Edmonton, Alta., Canada, Anchorage, Alaska, and beyond.

Pan American World Airways Inc. operates between Seattle, Wash., U.S.A., and Fairbanks, Alaska, with points of call at Juneau and Annette Island, Alaska, and Whitehorse, Y.T., Canada, and between the U.S.A., Gander, Nfld., Canada, and Europe.

Qantas Empire Airways Ltd. operates between Sydney, Australia, San Francisco, Cal., U.S.A., and Vancouver, B.C., Canada.

Sabena Belgian World Airlines operates between Brussels, Belgium, and New York, N.Y., U.S.A., via Shannon, Ireland, and Montreal, Que., Canada.

Scandinavian Airlines System operates between Stockholm, Sweden, Oslo, Norway, Copenhagen, Denmark, Prestwick, Scotland, Gander, Nfld., Canada, and New York, N.Y., U.S.A.

Seaboard and Western Airlines, Inc. operates between points in the United States, Gander, Nfld., Canada, and beyond.

TWA (Trans-World Airlines, Inc.) operates between points in the United States, Gander, Nfld., Canada, and points abroad.

United Air Lines, Inc. operates between Vancouver, B.C., Canada, and Seattle, Wash., U.S.A., via Bellingham, Wash., U.S.A.

Western Air Lines, Inc. operates between Great Falls, Mont., U.S.A., Cut Bank, Mont., U.S.A., and Lethbridge, Alta., and Edmonton, Alta., Canada, via Calgary and Penhold, Alta., Canada.

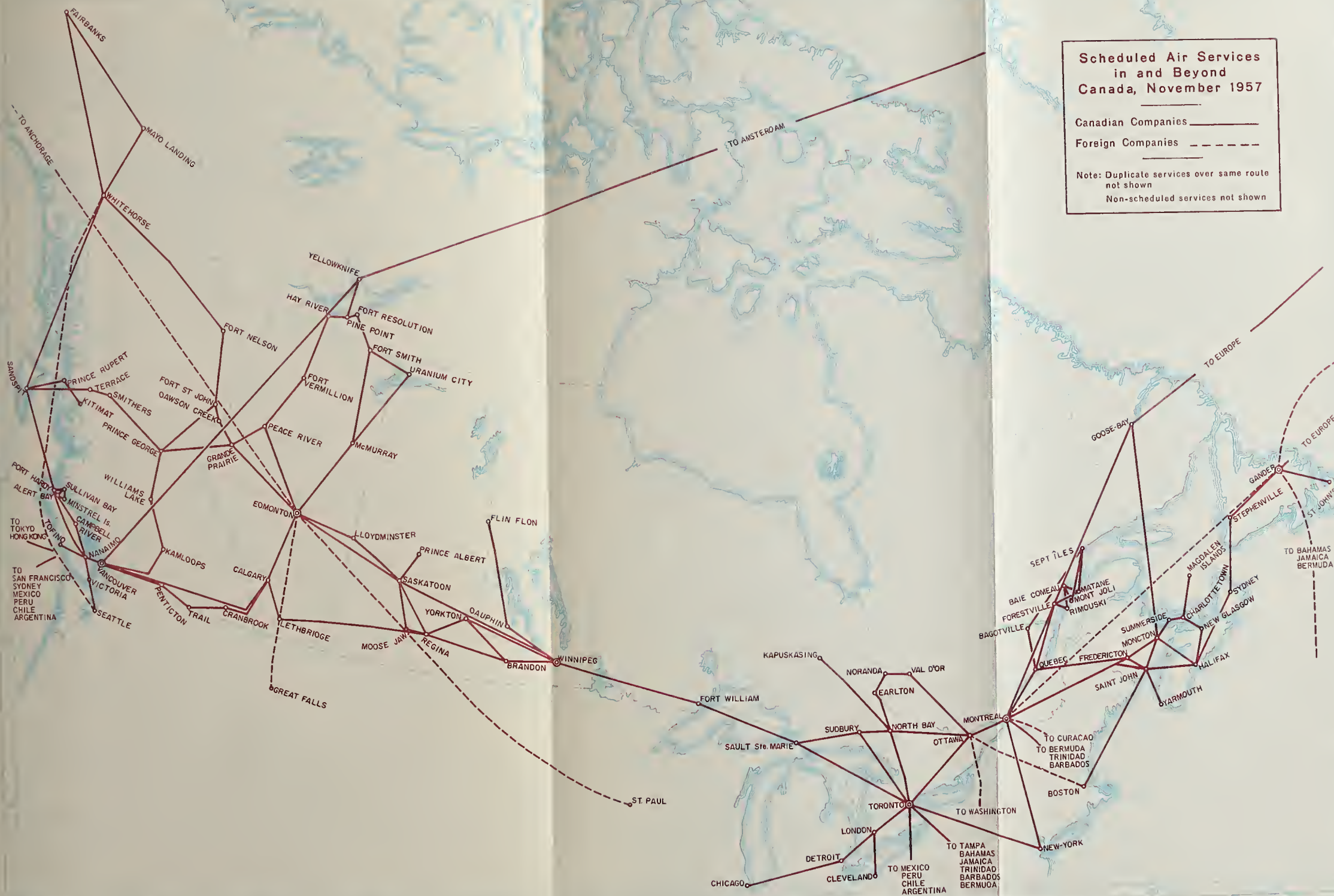
Scheduled Air Services in and Beyond Canada, November 1957

Canadian Companies _____

Foreign Companies - - - - -

Note: Duplicate services over same route
not shown

Non-scheduled services not shown



Section 3.—Civil Aviation Statistics

Ground Facilities.—Aircraft landing areas in Canada are classified in Table 3 by administrative agency. Instrument Landing Systems (ILS), designed to facilitate safe landings under low visibility conditions, have been installed at 20 airports and nine of them are regular ports of call for international commercial air services.

3.—Aerodromes by Province as at July 31, 1957

NOTE.—An aerodrome is defined by the Air Regulations 1951 as: a defined area on land or water (including any buildings, installations and equipment) intended to be used wholly or in part for the arrival, departure, movement and servicing of aircraft. This table was compiled by the Aeronautical Charts Section, Department of Mines and Technical Surveys. The aerodromes included are in usable condition.

Operator	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Yukon	Canada
Landing Areas													
Canadian Pacific Air Lines—													
Land.....	—	—	—	—	—	—	—	—	1	—	—	—	1
Water.....	1	—	—	—	2	5	5	1	4	—	4	1	23
Department of Northern Affairs													
and National Resources—													
Land.....	—	—	—	—	—	—	—	2	2	—	—	2	6
Water.....	—	—	—	—	—	—	—	—	1	—	6	2	9
Department of Transport—													
Land.....	2	1	3	1	10	33	6	7	7	22	10	3	105
Water.....	—	—	—	—	—	—	—	—	—	2	4	—	6
Municipal—													
Land.....	1	—	2	2	10	17	6	9	10	17	—	—	74
Water.....	—	—	—	—	—	2	—	—	1	4	—	—	7
Provincial—													
Land.....	1	—	—	—	1	—	—	2	—	1	—	4	9
Water.....	—	—	—	—	—	18	6	2	—	—	—	—	26
Private—													
Land.....	—	1	—	4	18	27	3	6	7	4	4	4	78
Water.....	2	—	—	—	21	33	12	1	3	5	4	—	81
Royal Canadian Air Force—													
Land.....	2	1	2	3	6	12	7	3	9	5	1	2	53
Water.....	1	—	—	—	—	2	—	—	—	1	3	—	7
Royal Canadian Navy—													
Land.....	—	—	1	—	—	—	—	—	—	—	—	—	1
Water.....	—	—	1	—	—	—	—	—	—	—	—	—	1
Canadian Army—													
Land.....	—	—	—	—	—	—	—	—	—	3	—	5	8
Water.....	—	—	—	—	—	—	—	—	—	—	—	—	—
United States Air Force—													
Land.....	1	—	—	—	—	—	—	—	—	—	—	—	1
Water.....	—	—	—	—	—	—	—	—	—	—	—	—	—
United States Navy—													
Land.....	1	—	—	—	—	—	—	—	—	—	—	—	1
Water.....	1	—	—	—	—	—	—	—	—	—	—	—	1
Totals, Landing Areas—													
Land.....	8	3	8	10	45	89	22	29	36	52	15	29	337
Water.....	5	—	1	—	23	60	23	4	9	12	21	3	161
Auxiliary Facilities													
Hard-surfaced aerodromes—													
Land.....	5	2	8	7	22	44	13	13	15	23	3	2	157
Lighted aerodromes—													
Land.....	6	2	4	4	21	41	10	12	16	23	11	3	153

Air Traffic Control.—The primary functions of Air Traffic Control Service of the Department of Transport are to expedite and maintain an orderly flow of air traffic and to prevent collision between aircraft operating within controlled airspace and between aircraft and obstructions on the movement area of controlled airports. This is accomplished through airport control, approach control and area control services, together with flight information, alerting for search and rescue, customs notification and aircraft identification. These services are described as follows:—

Airport Control is designed particularly to provide air-traffic control service in the vicinity of major civil airports where the volume and type of aircraft operations, together with weather conditions and other factors, indicate its need in the interest of safety. The service includes the control of pedestrians and vehicles on the manoeuvring area of the airport. Control is effected by means of direct radiotelephone communication or visual signals to aircraft and surface vehicles on and in the vicinity of controlled airports. The control towers are located at Patricia Bay, Port Hardy and Vancouver, B.C.; Lethbridge, Calgary and Edmonton, Alta.; Saskatoon and Regina, Sask.; Winnipeg, Man.; the Lakehead, Windsor, London, Toronto, Toronto Island, Ottawa and North Bay, Ont.; Montreal, Cartierville, Quebec, Val d'Or, Mont Joli and Sept-Îles, Que.; Moncton and Saint John N.B.; Sydney, N.S.; and Gander, Nfld. Most of these control towers are in continuous operation but a few provide 16-hour daily service only.

Approach Control is provided by the North Bay and Ottawa approach control towers. This service is in addition to the regular airport control service provided at these locations. Approach control service consists of the provision of standard IFR separation to aircraft operating in accordance with the Instrument Flight Rules within the local approach control area of the airport.

Area Control is designed particularly to provide air-traffic control service to aircraft operating within controlled airspace during weather conditions which prevent a pilot from seeing other aircraft or obstructions and necessitate his reliance on instruments to conduct the flight. Area control centres are located at Vancouver, B.C.; Edmonton, Alta.; Winnipeg, Man.; Toronto, Ont.; Montreal, Que.; Moncton, N.B.; and Goose and Gander, Nfld. Each centre is connected with the control towers, radio range stations and operations offices within its area by means of an extensive system of local and long-line interphone or radio circuits and through the radio communication facilities available at these offices to all aircraft requiring area control service. Each area control centre is similarly connected with the adjacent centres, including centres in the United States, for the purpose of co-ordinating the control of aircraft operating through more than one control area. This communications system permits each centre to maintain a continuous detailed record of the movements of all aircraft operating in accordance with the Instrument Flight Rules, and a general record of the movements of all aircraft operating in accordance with the Visual Flight Rules within its control area. In addition to providing area control service to aircraft operating within the controlled airspace over Newfoundland, the Gander area control centre provides this service within the airspace over approximately one-half of the North Atlantic Ocean. Area control service is provided for approximately 15,000 miles of airways, air routes and control channels.

Flight Information provides advice and information useful for the safe and efficient conduct of flight, including weather reports and forecasts, field condition reports, data concerning aids to navigation, traffic information, refuelling and transportation facilities and other related data of assistance to the pilot in planning or conducting a flight. Such service is provided by all air-traffic control units but particularly by the seven area control centres—one to a region.

Alerting for Search and Rescue is designed to ensure that the appropriate organizations are notified of aircraft in need of search and rescue aid and otherwise to assist such organizations, as required. Area control centres are responsible for notifying these organizations promptly of non-arrival at destination of any aircraft for which a flight plan or flight notification has been received. This requires the maintenance and constant supervision of a continuous record of active flights to ensure that non-arrival of any aircraft is detected immediately. The service is available to any pilot who files either a flight plan or a flight notification with any communications agency of the Air Services of this Department or directly with one of the area control centres or control towers.

Customs Notification Service facilitates the routine notification of the appropriate customs agency by pilots who plan to cross the Canada-United States boundary. The Air-Traffic Control communications system and units connected therewith forward pilot requests to notify the customs officer at the airport of destination.

Aircraft Identification Service is provided by area control centres to assist the Department of National Defence in establishing the identification of all aircraft operating within specified areas.

The number of controlled operations in Canada during 1957 was 2,838,066, an increase of 27 p.c. over 1956.

Summary of Operation Statistics.—The statistics given in Table 4 show the steady increase in recent years in passenger, freight and mail traffic.

4.—Summary Statistics of Civil Aviation 1953-56

NOTE.—Figures shown in this table include operations of Canadian international carriers and Canadian operations of foreign carriers. Figures published in previous editions of the Year Book covered domestic carriers only.

Item	1953*	1954*	1955	1956
Aircraft Miles Flown—				
Revenue.....No.	64,076,912	61,582,481	83,805,304	101,723,710
Non-revenue....."	..	..	..	..
Totals.....No.	64,076,912	61,582,481	83,805,304	101,723,710
Passengers Carried—				
Revenue.....No.	2,724,432	2,792,348	3,249,099	3,864,818
Non-revenue....."	71,405	73,199	54,076	58,721
Totals.....No.	2,795,837	2,865,547	3,303,175	3,923,539
Passenger Miles—				
Revenue.....No.	942,269,095	1,066,805,242	1,223,825,448	1,547,279,882
Non-revenue....."	45,784,828	49,134,404	57,477,989	61,416,920
Totals.....No.	988,053,923	1,115,939,646	1,281,303,437	1,608,696,802
Freight Carried—				
Revenue.....lb.	177,451,345	109,299,356	233,561,830	319,260,401
Non-revenue....."	5,268,374	5,714,121	7,121,832	7,639,517
Totals.....lb.	182,719,719	115,013,477	240,683,662	326,899,918
Freight Ton-Miles—				
Revenue.....No.	11,738,487	14,057,279	18,084,169	22,065,286
Non-revenue....."	2,796,334	3,379,895	3,477,194	3,039,907
Totals.....No.	14,534,821	17,437,174	21,561,363	25,105,193
Mail carried.....lb.	20,319,952	24,228,571	26,616,505	27,914,288
Mail ton-miles.....No.	6,419,077	8,239,855	9,048,610	10,238,458
Hours Flown by Aircraft—				
Transportation revenue.....No.	415,698	397,057	530,924	646,902
Transportation non-revenue....."	26,044	21,516	31,306	37,567
Patrols, surveys, etc....."	83,193	75,760	74,989	87,920
Totals.....No.	524,935	494,333	637,219	772,389
Gasoline consumption.....gal.	51,817,843	53,164,769	77,938,918	102,836,140
Lubricating oil consumption....."	649,664	695,642	1,006,154	1,212,361
Licensed civil airports (all types).....No.	433	470	495	519
Year Ended Mar. 31—				
	1953	1954	1955	1956
Licensed Civil Aircraft (all types)—				
Gross weight—				
Up to 2,000 lb.....No.	1,242	1,331	1,495	1,492
2,001 - 4,000 lb....."	567	668	855	876
4,001 - 10,000 lb....."	450	488	530	548
10,001 - 20,000 lb....."	33	48	49	50
Over 20,000 lb....."	136	159	219	251
Totals, Aircraft.....No.	2,428	2,694	3,148	3,217

* Includes employees other than crews.

4.—Summary Statistics of Civil Aviation 1953-56—concluded

Item	Year Ended Mar. 31—concluded			
	1953	1954	1955	1956
Ownership, Commercial—				
Up to 2,000 lb. No.	540	550	595	555
2,001 - 4,000 lb. "	279	308	386	409
4,001 - 10,000 lb. "	285	314	328	345
10,001 - 20,000 lb. "	25	30	32	35
Over 20,000 lb. "	121	149	199	231
Ownership, Other—				
Up to 2,000 lb. No.	702	783	900	937
2,001 - 4,000 lb. "	288	350	469	467
4,001 - 10,000 lb. "	165	181	202	203
10,001 - 20,000 lb. "	8	19	17	15
Over 20,000 lb. "	15	10	20	20
Licensed Civil Air Personnel—				
Commercial pilots No.	1,319	1,532	1,712	1,872
Senior commercial "	218	337	342	335
Airline transport "	458	589	663	778
Glider pilots "	107	136	162	208
Transport pilots "	269	—	—	—
Private pilots "	4,483	4,508	5,034	5,402
Air navigators "	43	53	57	64
Air traffic controllers "	183	199	244	284
Air engineers "	1,418	1,429	1,448	1,619
Aircraft maintenance engineers "	—	—	24	26

Table 5 shows civil aviation figures for 1956 by type of service. A definition of scheduled and non-scheduled carriers is given on p. 870. Statistics for international carriers include traffic over Canadian territory for both Canadian and foreign operators; a small traffic across Canadian territory and between foreign stations is also included.

5.—Summary Statistics of Civil Aviation by Type of Service 1956

Item	Canadian Carriers			Foreign Inter-national	Total
	International ¹	Scheduled	Non-scheduled and Other		
Aircraft—Miles Flown—revenue transportation No.	16,425,566	52,688,993	29,322,935	3,286,216	101,723,710
Passengers Carried No.	683,890	2,204,752	481,325	553,572	3,923,539
Revenue "	682,973	2,196,090	441,642	544,113	3,864,818
Non-revenue "	917	8,662	39,683	9,459	58,721
Passenger-Miles ² No.	551,298,705	982,723,410	5,503,886	69,170,801	1,608,696,802
Revenue "	534,176,586	941,074,180	5,389,007	66,640,109	1,547,279,882
Non-revenue "	17,122,119	41,649,230	114,879	2,530,692	61,416,920
Freight Carried lb.	15,729,067	136,469,191	163,540,340	9,942,801	326,899,918 ³
Revenue "	15,140,878	131,167,751	162,476,287	9,257,266	319,260,401 ³
Non-revenue "	588,189	5,301,440	1,064,053	685,535	7,639,517 ³
Freight Ton-Miles No.	9,038,924	14,656,150	175,683	925,539	25,105,193 ³
Revenue "	8,214,214	12,641,612	151,849	748,714	22,065,286 ³
Non-revenue "	824,710	2,014,538	23,834	176,825	3,039,907
Mail carried lb.	2,156,291	22,131,279	1,282,709	2,344,009	27,914,288
Mail ton-miles No.	1,943,769	7,861,272	89,063	344,354	10,238,458
Hours Flown by Aircraft No.	69,735	326,207	360,892	15,555	772,389
Transportation revenue "	67,946	302,507	260,983	15,466	646,902
Transportation non-revenue "	1,789	18,885	16,804	89	37,567
Patrols, surveys, etc. "	—	4,815	83,105	—	87,920
Gasoline consumption gal.	14,027,597	58,059,860	11,342,890	19,405,793	102,836,140
Lubricating oil consumption "	189,979	648,445	164,250	209,687	1,212,361

¹ Includes trans-border services.

² Exclusive of charter service, figures for which are not available.

³ Includes freight, excess baggage and express.

6.—Capital Investment of the Department of Transport in Air Services as at Mar. 31, 1954-56

NOTE.—Compiled from Department of Transport records

Item	1954 ^r	1955	1956	Total as at Mar. 31, 1956
	\$	\$	\$	\$
Airways and Airports	5,018,432	6,381,392	17,866,722	306,682,937
Civil Aviation—				
Capital appropriations.....	8,022,940	10,229,143	20,380,084	279,075,863
Transferred from other Departments.....	—	131,000	187,736	
Property transferred to Crown Assets Disposal Corporation.....	Cr. 4,792,762	Cr. 6,291,708	Cr. 4,589,963	
Property retired through obsolescence, loss or abandonment.....	—	124,477	Cr. 830,678	
Telecommunications Division (Aviation Radio Aids)—				
Capital appropriations.....	1,909,395	2,188,480	2,726,143	27,607,124
Property transferred to Crown Assets Disposal Corporation.....	—	—	Cr. 6,600	
Property retired through obsolescence, loss or abandonment.....	Cr. 121,141	—	—	
Telecommunications Division (excl. Aviation Radio Aids)	1,029,163	1,549,058	1,155,957	20,237,915
Radio Act and Regulations.....	287,946	251,254	196,257	1,115,367
Radio Aids to marine navigation.....	380,456	555,444	477,455	3,172,477
Northwest Communication System.....	361,218	803,855	485,414	15,950,071
Transferred to other Departments.....	Cr. 457	—	—	
Property transferred to Crown Assets Disposal Corporation.....	—	Cr. 11,805	Cr. 2,031	
Property retired through obsolescence, loss or abandonment.....	—	Cr. 49,690	Cr. 1,138	
Meteorological Facilities	907,440	915,604	1,304,285	5,867,463
Capital appropriations.....	907,440	915,604	1,057,686	5,867,463
Transferred from other Departments.....	—	—	246,599	
Canadian Government Transatlantic Air Service	—	—	Cr 4,788,369	—
Totals	6,955,035	8,846,054	15,538,595	332,788,265

7.—Expenditure and Revenue of the Department of Transport in connection with Air Services, Years Ended Mar. 31, 1954-56

NOTE.—Compiled from Department of Transport records.

Item	1954	1955	1956
	\$	\$	\$
Expenditure			
Air Transport Board	356,563	268,287	247,552
Air Services Administration	230,203	244,439	670,123
Civil Aviation Division (incl. Aviation Radio Aids)	17,890,349	18,499,590	19,389,446
Control of Civil Aviation.....	909,600	1,000,885	1,035,412
Construction Services, administration.....	785,246	874,554	793,273
Grants to aeroplane clubs.....	307,250	335,050	301,750
Grants to National Research Council.....	50,000	—	—
Airways and Airports, Operation and Maintenance—			
Ordinary.....	8,790,905	8,764,906	9,081,301
Aviation radio aids.....	5,178,689	5,578,798	5,874,174
Contributions to assist municipalities.....	142,192	98,170	80,097
Contribution to State of Michigan.....	15,000	24,900	19,780
Contribution to International Civil Aviation Organization re Iceland Government air aids to navigation.....	38,319	38,398	29,138
Contribution to Denmark in joint support of North Atlantic Air Navigation facilities in the Faroes and Greenland.....	67,608	61,328	48,865
Contribution to South Pacific Air Transport Council.....	122,500	122,500	122,500
Contributions towards development of landing facilities in mining areas.....	40,000	2,000	80,510
Airways and airports traffic control.....	1,443,040	1,598,101	1,922,646

**7.—Expenditure and Revenue of the Department of Transport in connection with
Air Services, Years Ended Mar. 31, 1954-56—continued**

Item	1954	1955	1956
	\$	\$	\$
Expenditure—concluded			
Telecommunications Division (excl. Aviation Radio Aids)	5,487,823	4,623,622	4,574,196
Administration of Radio Act and Regulations	1,026,209	1,420,455	1,555,992
Radio Aids to Marine Navigation	2,135,890	2,308,412	2,274,286
Suppression of radio interferences	375,307	—	—
Issue of radio receiving licences	40,862	—	—
Telegraph and Telephone Services—			
Administration, operation and maintenance	1,438,997	556,293	444,871
Construction and improvements	470,558	338,462	299,047
Meteorological Division, Operation and Maintenance	6,336,415	6,860,870	7,326,209
Totals, Expenditure	30,301,353	30,496,808	32,207,526
Revenue and Receipts			
Air Services Administration	3	44	1
Civil Aviation Division (incl. Aviation Radio Aids)	5,823,535	6,025,233	6,953,052
Private air pilots' certificates	6,333	10,705	17,575
Aircraft registration fees	5,237	6,277	7,060
Airport licences	391	231	321
Airworthiness certificates	1,830	1,529	2,190
Fines, Aeronautics Act and Regulations	1,775	1,633	4,668
Aircraft landing fees	2,267,717	2,211,046	2,841,371
Rentals at airports	632,554	792,716	734,410
Outside and hangar space rental	558,432	564,157	512,105
Rental of equipment	8,552	8,253	13,172
Rentals, employees quarters	263,663	290,121	328,006
Miscellaneous rentals	56,804	75,574	71,062
Power service	76,950	79,574	95,053
Concessions—			
Gasoline and oil	502,102	530,990	707,312
Taxi	37,282	43,838	56,781
Telephone	8,208	9,445	11,999
Restaurants and snack bars	13,407	13,931	51,374
Car parking area	—	—	43,378
Other	74,455	82,886	74,106
Telephone service	8,583	18,657	18,592
Airport radio service to aircraft	396,288	357,941	374,573
Radio message tolls	34,665	18,078	55,437
Mess receipts	22,497	20,669	30,610
Sales miscellaneous	17,649	47,443	23,945
Aircraft servicing other than repairs	5	—	—
Observation roof turnstiles	19,677	20,296	25,243
Miscellaneous revenue	96,958	132,954	107,524
Gander Airport—			
Mess hall accommodation	18,436	21,039	22,544
Airlines hotel accommodation	32,135	39,511	39,775
Skyways Club	2,822	5	—
Coal sales	29,408	30,683	21,953
Mess hall board	20,470	23,265	23,878
Airlines hotel dining room	82,814	62,555	56,799
Airlines hotel bar	59,021	46,063	52,974
Skyways Club snack bar	14,942	54	—
Skyways Club bar	4,377	—	—
Laundry	1,529	—	—
Dry-cleaning plant	12	—	—
Recoverable services	78,020	44,548	22,896
Heating	189,190	185,304	192,593
Electricity	114,584	140,602	150,300
Bakery	7,130	—	—
Sanitary fees	8,965	3,730	3,006
Bus operation	3,262	5,270	8,124
Assessment collections	441	457	465
Net profit commercial caterers	9,354	26,773	97,682
Refunds, previous year's expenditure	34,609	56,420	52,166
Telecommunications Division (excl. Aviation Radio Aids)	1,566,029	2,831,151	1,331,027
Radio operators' examination fees	1,572	1,902	1,703
Radio Station Licences—			
Aircraft station	13,033	15,142	16,825
Amateur experimental station	17,415	18,859	16,925
Commercial receiving station	139	211	624

7.—Expenditure and Revenue of the Department of Transport in connection with Air Services, Years Ended Mar. 31, 1954-56—concluded

Item	1954	1955	1956
	\$	\$	\$
Revenue and Receipts—concluded			
Telecommunications Division (excl. Aviation Radio Aids)—concluded			
Radio Station Licences—concluded			
Experimental station.....	1,012	1,350	1,280
Limited coast station.....	350	900	950
Municipal police private commercial station.....	313	366	413
Private commercial station.....	73,882	88,325	106,202
Public commercial station.....	11,190	14,290	18,915
Ship station.....	35,467	37,944	42,033
Commercial broadcasting receiving stations.....	—	—	1,289
Technical and training school station.....	25	40	32
Sale of transport publications.....	1,259	2,545	2,816
Fines—Radio Act and Regulations.....	1,826	220	196
Radio Message Tolls—			
DOT operated coast stations.....	172,470	160,888	126,613
Marconi operated coast stations.....	77,684	81,609	86,097
Rentals, Living Quarters—			
Employees.....	26,122	30,143	28,621
Other.....	4,326	2,669	1,881
Government telegraph and telephone tolls.....	952,687	524,641	203,467
Sale of British Columbia facilities.....	—	1,500,000	—
Sale of Maniwaki—St. Thérèse landlines.....	—	7,500	—
Sale of Mount Hayes—Sandspit system.....	—	—	35,000
Mess receipts.....	327	60	3,899
Sundries.....	19,764	4,670	6,336
Northwest Communication System.....	121,592	300,962	592,202
Refunds, previous year's expenditure.....	33,574	35,918	36,708
Meteorological Division.....	41,532	39,719	58,773
Rentals, Living Quarters—			
Employees.....	20,262	23,041	26,429
Other.....	3,399	3,731	4,301
Sale of transport publications.....	3,405	2,429	2,063
Radio commercial message tolls, DOT operated coast stations.....	688	843	3,042
Communication facilities, inter-office.....	350	321	2,506
Power service.....	754	367	474
Sundries.....	6,296	760	12,079
Refunds, previous year's expenditure.....	6,378	8,227	7,879
Totals, Revenue and Receipts.....	7,431,099	8,896,150	8,342,853

No statistics are available regarding total expenditure on flying operations by the federal and provincial governments or by private individuals, but capital expenditure by commercial air carriers for property as reported for the end of 1954 and 1955 is shown in Table 8.

8.—Cost of Property, Revenue and Expenditure for Scheduled and Other Commercial Air Carriers 1954 and 1955

Item	1954			1955		
	Scheduled ¹	Other	Total	Scheduled ¹	Other	Total
	\$	\$	\$	\$	\$	\$
Cost of Property.....	37,927,946	5,020,059	42,948,005	52,850,072	9,830,249	62,680,321
Aircraft.....	20,625,272	3,069,903	23,695,175	30,667,114	5,600,300	36,267,414
Aircraft engines.....	6,557,267	571,122	7,128,389	9,146,254	1,252,040	10,398,294
Buildings and improvements.....	6,438,750	734,074	7,172,824	7,069,640	1,194,005	8,263,645
Miscellaneous.....	4,306,657	644,960	4,951,617	5,967,064	1,783,904	7,750,968
Revenue and Expenditure—						
Revenue.....	90,730,262	18,134,027	108,864,289	114,641,750	38,097,268	152,739,018
Expenditure.....	89,076,669	17,910,700	106,987,369	110,963,062	35,691,752	146,654,814

¹ Includes Canadian trans-border, transatlantic and transpacific services.

Employees and Salaries and Wages.—The numbers of civil air personnel licensed in recent years are shown in Table 4, p. 876. However the figures in Table 9 include pilots and engineers in the employ of the Federal Government and of private individuals as well as those not employed at all in the ordinary sense.

9.—Employees and Salaries and Wages in Civil Aviation 1955

Class of Employee	Scheduled		Non-scheduled		Totals	
	Em- ployees	Salaries and Wages	Em- ployees	Salaries and Wages	Em- ployees	Salaries and Wages
	No.	\$	No.	\$	No.	\$
General officers.....	740	4,957,817	149	994,687	889	5,952,504
Clerks.....	1,480	4,141,462	174	469,006	1,654	4,610,468
Pilots.....	409	4,753,793	578	3,238,968	987	7,992,761
Co-pilots.....	404	2,318,764	77	422,730	481	2,741,494
Despatchers.....	121	625,442	47	153,249	168	778,691
Communication operators.....	820	2,548,536	39	112,557	859	2,661,093
Stewards or other attendants.....	509	1,720,555	9	21,691	518	1,742,246
Air engineers.....	503	2,552,321	306	1,232,458	809	3,784,779
Mechanics.....	2,588	10,582,937	331	1,044,905	2,919	11,627,842
Airport employees.....	1,824	6,157,205	136	355,372	1,960	6,512,577
Stores employees.....	300	996,724	46	144,811	346	1,141,535
Other employees.....	1,419	5,359,286	262	615,623	1,681	5,974,909
Totals¹.....	11,117	46,714,842	2,154	8,806,057	13,271	55,520,899

¹ Excludes 512 employees of foreign carriers domiciled in Canada.

PART VI.—OIL AND GAS PIPELINES*

A special article covering the history and development of pipeline construction in Canada appears in the 1954 Year Book at pp. 861-869. Additional information has been carried in each succeeding edition and the following Section brings pipeline development up to mid-1957.

Section 1.—Pipeline Developments

Oil Pipelines.—Most of the crude oil in Canada, both domestically produced and imported, is carried through a network of pipelines connecting batteries, refineries and ports. This transportation system has grown rapidly in recent years and, at the end of 1956, totalled 7,321 miles exclusive of the miles of loops installed parallel to the original line to increase throughput capacity. Most of this system of pipelines (5,807 miles) is in Canada and the remainder is in the United States where it is used to transport Canadian crude oil exclusively.

The two principal components of the system are the trunk pipelines of Interprovincial Pipe Line Company and Trans Mountain Oil Pipe Line Company, both originating in Edmonton, Alta. The Edmonton pipeline terminal is served by six feeder lines bringing in crude oil from the surrounding fields: Britam oil Pipe Line Company Limited, Pembina Pipe Line Limited, Imperial Pipeline Company Limited, Edmonton Pipeline Company Limited, Interprovincial Pipe Line Company, and Texaco Exploration Company.

Interprovincial Pipeline.—Interprovincial pipeline stretches 1,765 miles from Edmonton to Sarnia in Ontario, gathering crude from the three Prairie Provinces and making deliveries along the line. During 1957 the line was being extended 156 miles to Toronto. Saskatchewan oil is accepted from two pipeline companies—Mid-Saskatchewan Pipe Lines Limited at Ermine, and South Saskatchewan Pipe Line Company at Regina. Deliveries are made by Interprovincial to two other systems—B.A. Saskatchewan Pipe Line Limited at Stony Beach and Saskatoon Pipe Line Company at Milden—and also to

* Prepared by R. B. Toombs, Petroleum Engineer, Department of Mines and Technical Surveys, Ottawa.

refineries in Regina. Crude oil from the new fields of southeastern Saskatchewan is delivered by Westspur Pipeline Company, connecting with the Interprovincial line at Cromer, Man., where the Trans-Prairie Pipeline Limited system, serving the Manitoba fields, also connects. Deliveries in Manitoba are made to Brandon and to Winnipeg Pipeline Company at Gretna. In the United States, Interprovincial serves a connecting pipeline to St. Paul, Minn., and makes deliveries at Wrenshall, Minn.; Superior, Wis.; and West Branch, Midland and Bay City, Mich.

Sixty-seven miles of 24-inch loop and 52 miles of 26-inch loop were constructed in 1956, providing a two-line system from Regina to Clearbrook, Minn. Pumping capacity was increased and additional storage tanks were erected at Cromer. Construction was started on a second pump station at Indian River, Mich.

Capacities of the line, in barrels per day, between selected points at the end of 1956 were: Edmonton to Regina, 217,000; Regina to Cromer, 193,000; Cromer to Gretna, 241,000; Gretna to Superior, 212,000; and Superior to Sarnia, 147,000. Gross deliveries to regions served by the pipeline were: Western Canada, 33,700,000 bbl.; U.S. refineries, 16,900,000 bbl.; tankers out of Superior, 5,600,000 bbl.; and Eastern Canada, 40,500,000 bbl. Tariff charges from Edmonton to Regina, Gretna, Superior, and Sarnia were 23½, 36, 44 and 64 cents per bbl., respectively. From Cromer to Sarnia the rate was 48 cents per bbl.

Trans Mountain Pipeline.—This line serves the area westward from Edmonton. In addition to taking oil from the six feeder lines at Edmonton, it is linked at Edson, Alta., with a pipeline bringing crude from the Sturgeon Lake area in Alberta. No deliveries are made in Alberta but all crude transported comes from that province. Deliveries are made to refineries at Kamloops and Vancouver in British Columbia, and Ferndale and Anacortes in Washington State. Deliveries may be made to tankers at a marine loading dock at Vancouver.

During 1956 construction started on two permanent pump stations at Jasper and Gainford, Alta., but by mid-1956 it was necessary to install two temporary units to meet demands for crude oil, and the capacity of the line was increased from 150,000 to 185,000 bbl. a day. In November the temporary pump station at Jasper was destroyed by fire, causing a reduction in capacity, but a permanent station was completed at that point early in 1957 again bringing the line's capacity to at least 185,000 bbl. a day. The capacity of the Washington State line was increased to 200,000 bbl. a day by construction of a pump station at Laurel.

Total deliveries for 1956 were 47,251,641 bbl., of which 46.1 p.c. was delivered to Canadian refineries, 40.7 p.c. to Washington State refineries and 13.2 p.c. constituted offshore shipments. This was the first year crude oil was shipped by sea from Trans Mountain pipeline and, during the year, 53 tankers were loaded at Vancouver. Tariff charges from Edmonton or Edson to Kamloops, Vancouver, Ferndale and Anacortes were 43, 45, 47 and 47 cents per bbl. The marine loading charge at Vancouver was 2½ cents per bbl.

Other Oil Pipelines.—The addition during 1956 of 728 miles of operational oil pipeline reflected the continuing growth of the oil pipeline industry. Pembina Pipe Line Limited installed 153 miles of line to serve the expanding Pembina field in Alberta. Construction on the main pump station was completed and throughput during the year was about 32,120,000 bbl. Peace River Pipe Line Company Limited completed 107 miles of trunk line and 37 miles of gathering lines which connect Sturgeon Lake, Sturgeon Lake South and Little Smoky fields in Alberta with the Trans Mountain line at Edson. Deliveries began in March and throughput totalled 1,824,000 bbl. in 1956. Cremona Pipelines Limited constructed a trunk line to Calgary from the Sundre field 65 miles northwest of the city. The line will also carry crude to Calgary from the Westward Ho, Harmattan, and Elkton fields in Alberta. Britam Oil Pipeline Company Limited, formerly Canadian Gulf Pipe Line Company, extended its system 35 miles south from the Fenn-Big Valley field to West Drumbeller. Rangeland Pipe Line Company Limited constructed a 50-mile

gathering line and a 10-mile trunk line from the West Joffre, Bentley, Gilby and West Gilby fields in Alberta to Rimbey, Alta., where the system connects with the Texaco Exploration Company pipeline to Edmonton.

In southwestern Saskatchewan, South Saskatchewan Pipe Line Company installed 59 miles of main line connecting the Dollard, Leon Lake, Instow, Bone Creek, Gull Lake and North Premier fields with the Company's existing trunk line in the Cantuar field. The line is capable of delivering 28,000 bbl. a day to the Interprovincial system at Regina. A new line to serve the fields in southeastern Saskatchewan was completed in July 1956 by Westspur Pipe Line Company. In the last six months of the year, a total of 3,928,330 bbl. of crude oil from the Midale, Steelman, Frobisher, Alida, Kingsford, Nottingham, Ingoldsby, Rosebank and Edenvale fields was carried to the Interprovincial receiving station at Cromer in Manitoba. In December, Trans-Prairie Pipelines Limited completed a 25-mile pipeline which connects with the Westspur line in the Midale field and carries crude from the fields of Weyburn and Halbrite.

Sarnia Products Pipe Line, a division of Imperial Oil Limited and one of three products pipelines in Ontario, constructed 38.5 miles of 12-inch loop between Waterdown and North Toronto and added pumping units at its three pump stations increasing capacity to 76,000 bbl. a day. Trans-Northern Pipe Line Company Limited increased throughput capacity of its Montreal-Toronto-Hamilton line from 50,000 to 65,000 bbl. a day.

Natural Gas Pipelines.—During 1956, Westcoast Transmission Company Limited and Trans-Canada Pipe Lines Limited began construction on lines that will deliver Alberta natural gas to Western and Eastern Canada, respectively. These were the most important developments in the pipeline industry in that year.

Westcoast Transmission Pipeline.—By the end of 1956, Westcoast Transmission had completed about 70 p.c. of the 650 miles of 30-inch main line from Taylor in northeastern British Columbia to Vancouver and the United States border near Huntingdon, B.C. The line will have an initial design capacity of 400,000,000 cu. feet of gas a day, three-quarters of which is destined to serve the northwest region of the United States through the Pacific Northwest Pipeline Corporation. In anticipation of deliveries of Canadian natural gas by Westcoast, British Columbia Electric Company converted the manufactured gas system in the Vancouver area to natural gas, enlarged it and began taking United States gas from a short Westcoast Transmission line connected with Pacific Northwest's system. When the Westcoast line is completed, B.C. Electric will receive domestically produced natural gas and the flow from the United States will be reversed. A second company, Inland Natural Gas Company Limited, was granted permission to construct a gas transportation system to serve the Okanagan Valley, West Kootenay and Cariboo regions in British Columbia with gas from Westcoast's line.

Westcoast has signed 20-year purchase contracts with producers in the Peace River area covering supplies of 450,000,000 cu. feet a day. The basic price to producers for the first five years, commencing Jan. 1, 1958, will be 10 cents per M cu. feet escalating $\frac{1}{4}$ cent per year to a maximum of $12\frac{1}{2}$ cents per M cu. feet. The price to B.C. Electric and Inland Natural Gas, after the initial build-up period will be $30\frac{1}{2}$ cents per M at 100 p.c. load factor. Sales to Pacific Northwest Pipeline, when the volume reaches 400,000,000 cu. feet daily, will be at the rate of 22 cents per M cu. feet under terms of an initial contract at 90 p.c. load factor and 25 cents at 90 p.c. load factor, under a second contract which provides for additional deliveries by 1959.

Trans-Canada Pipeline.—Trans-Canada Pipe Lines Limited in 1956 began construction of a 2,294-mile pipeline from near Burstall, Sask., to Montreal, Que., with a spur line to Ottawa. Construction did not commence until June, after the Company had received a temporary loan from the Canadian Government and, because of a strike in the steel industry in the United States and the resultant slow delivery, only 230 miles of 34-inch pipe had been laid by the time winter halted construction. To supply gas to Trans-Canada, Alberta Gas Trunk Line Limited constructed 34 miles of line to join the

Bindloss field about 60 miles north of Medicine Hat to the Trans-Canada intake terminal. Alberta Gas Trunk will construct and operate all feeder lines within Alberta that supply the Trans-Canada line.

During 1956, Trans-Canada signed gas sales contracts with five large distributors: Winnipeg and Central Gas Company, Northern Ontario Natural Gas Company, Consumers' Gas Company of Toronto, Union Gas Company of Canada, and Quebec Natural Gas Company.

Other Natural Gas Pipelines.—In Alberta, North Canadian Oils Limited completed a 136-mile 10-inch line to Hinton from the Wabamun gas terminal 40 miles west of Edmonton. Maximum capacity will be 70,000,000 cu. feet a day. South Alberta Pipe Lines Limited completed a 46-mile pipeline from the Etzikom gas field to Medicine Hat to serve a chemical plant there. Canadian Western Natural Gas Company extended its system by 111 miles to include four communities in the Lethbridge area and seven communities in the Calgary area.

The Saskatchewan Power Corporation constructed a transmission line from the Swift Current area to Moose Jaw and extended its northern distribution system to North Battleford and to Humboldt, including several towns en route. The Corporation laid 435 miles of pipe in 1956.

In southwestern Ontario, Consumers' Gas Company of Toronto, Union Gas Company of Canada Limited, Dominion Natural Gas Company and several smaller utilities extended their systems during 1956 in preparation for more adequate supplies of natural gas when the Trans-Canada pipeline from Alberta is completed. In all, 436 miles of gathering, transmission and distribution lines were constructed in Ontario and placed in operation.

Section 2.—Oil Pipeline Statistics*

There were 32 oil pipelines operating in Canada at Dec. 31, 1956, with a total mileage of 6,051 compared to 5,079 at the end of 1955. Pipeline deliveries shown in Table 1 were made to non-pipeline carriers, foreign pipelines, and terminals including refineries and distributing centres. Prior to 1950, deliveries were small and comparable statistics are not available mainly because the major pipelines were not in operation. Net gathering-system deliveries in Alberta fell sharply after the opening of the interprovincial system in 1950 because the new trunk line carried most of the oil formerly moved eastward by railway tank cars.

During 1956 operating revenues of all oil pipelines except Amurex Oil Development Company, Anglo American Exploration Company, Green River Exploration Company, Mobil Oil of Canada Limited, and Sarnia Products Line totalled \$78,316,555 compared with \$58,952,816 in 1955.

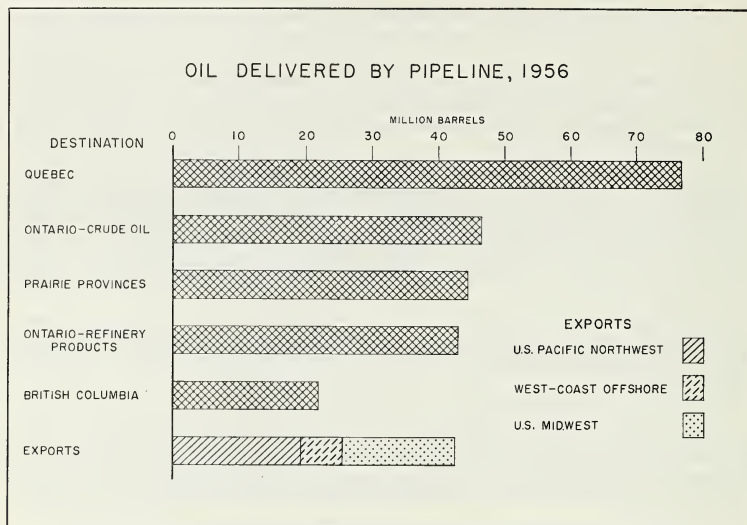
* Statistics of oil pipelines are given in greater detail in the DBS monthly report, *Pipe Lines (Oil) Statistics*.

1.—Oil Delivered by Pipeline 1952-57

Destination	1952	1953	1954	1955	1956	1957 ¹
	bbl.	bbl.	bbl.	bbl.	bbl.	bbl.
British Columbia.....	—	1,540,011	13,612,931	19,309,150	21,809,740	17,341,046
U.S. Pacific Northwest (at Sumas, B.C.).....	—	—	953,403	11,408,992	19,211,435	19,194,536
West Coast offshore shipments.....	—	—	—	—	6,230,466	6,904,960
Alberta ²	16,053,757	16,984,749	16,452,608	18,518,740	17,830,462	9,115,600
Saskatchewan.....	11,164,892	14,189,654	14,191,691	15,543,202	16,732,809	11,999,034
Manitoba.....	6,109,550	6,158,508	6,743,309	7,514,552	9,961,540	6,958,803
U.S. Midwest (at Gretna, Man.).....	1,424,456	2,507,314	1,435,895	5,246,832	16,867,189	14,030,060
Ontario—crude oil.....	20,096,308	28,016,817	33,340,688	41,148,261	46,515,517	30,628,218
Ontario—refinery products.....	3,093,944	24,868,257	32,441,988	37,894,021	43,022,682	29,820,971
Quebec.....	49,852,761	53,038,461	53,323,422	67,691,018	76,758,440	55,719,244
Totals, Net Deliveries.....	107,795,668	147,303,771	172,495,935	224,274,768	274,940,340	201,712,473

¹ First eight months only.

² Includes natural gasoline.



Employee and revenue data shown in Table 2 do not include statistics for eight pipelines operated as departments of the oil companies which are manned by employees on the regular payrolls of those companies.

2.—Operating Statistics of Oil Pipelines 1954-56

Item		1954	1955	1956
Barrels Handled (gross daily average)—				
Gathering.....	No.	193,308	309,467	419,342
Trunk.....	"	567,940	778,036	1,014,353
Barrel miles (trunk lines).....	'000,000	61,912	83,693	110,992
Average miles per barrel (trunk lines).....	No.	299	295	299
Average employees.....	"	1,185	1,267	1,500
Salaries and wages.....	\$	5,503,329	6,196,071	7,929,889
Man-hours worked by wage earners (including overtime).....	No.	621,700	683,861	834,493
Operating revenues.....	\$	41,765,773 ^r	58,952,816	78,316,555

CHAPTER XX.—COMMUNICATIONS

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

PART I.—GOVERNMENT CONTROL OVER AGENCIES OF COMMUNICATION*

The present phase of national radio broadcasting in Canada was entered upon in 1936 when, with the passage of the Canadian Broadcasting Act, the Canadian Broadcasting Corporation replaced the Canadian Radio Broadcasting Commission. The Act gave the Corporation wide powers in the operation of the system and gave to the Minister of Transport the technical control of all broadcasting stations.

Except for those matters covered by the Canadian Broadcasting Act, radio communications are now regulated under the Radio Act and Regulations which includes control of any equipment liable to cause interference to radio or television reception. In addition, all radio communication matters are administered in accordance with the provisions of the International Telecommunication Convention and Radio Regulations annexed thereto and in accordance with such regional agreements as the Inter-American Telecommunications Convention and Inter-American Agreement, and the North American Regional Broadcasting Agreement.

Land line telegraph and telephone tariffs and tolls charged by companies incorporated by the Federal Government are regulated by the Board of Transport Commissioners under the provisions of the Railway Act. Similarly, tariffs and tolls charged to the public by individuals or companies for radiotelephone communications within Canada are regulated by the Board of Transport Commissioners under the provisions of the Railway Act and the Regulations made under the Radio Act.

* Revised in the Telecommunications Branch, Department of Transport, Ottawa.

PART II.—WIRE COMMUNICATIONS*

Section 1.—Telegraphs

The early history of telegraphic communication in Canada is given in the 1934-35 Year Book, p. 778.

Telegraph Systems.—At the end of 1956, the 11 telegraph and cable companies in Canada showed impressive gains over the preceding year. These systems, composed of lines owned by the Federal Government and the chartered railway and telegraph companies, increased their property and equipment to \$150,000,000, about 20.6 p.c. above that reported by 10 companies in 1955.

New records were set in 1956 for operating revenues of \$40,720,000, up 3.6 p.c. from 1955, and net earnings of \$6,784,000, which gained almost 10 p.c. Telegrams and cables rose above 1955 totals but failed to exceed previous records. In proportion to population, Canadian facilities are among the most extensive in the world and the relative systems, with 442,900 miles of wire, operate under a great variety of climatic and geographic difficulties.

1.—Summary Statistics of Canadian Telegraphs 1947-56

NOTE.—Figures from 1920 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Gross Revenue	Operating Expenses	Net Operating Revenue	Pole-Line Mileage	Wire Mileage	Em- ployees ¹	Offices	Messages, Land ²	Cable- grams and Marconi- grams ³	Money Trans- ferred
	\$	\$	\$	miles	miles	No.	No.	No.	No.	\$
1947.....	18,514,525	17,359,796	1,154,729	51,024	401,803	8,711	4,640	18,987,774	1,613,621	10,988,591
1948.....	19,422,788	20,292,402	Dr.869,614	50,958	405,640	9,093	4,679	19,013,468	1,579,679	11,512,194
1949.....	22,256,557	22,062,943	193,614	52,535	413,759	9,555	5,288	20,063,078	1,642,278	12,469,348
1950.....	23,922,225	22,545,625	1,376,600	51,999	414,943	9,757	5,277	20,477,775	1,687,721	12,733,989
1951.....	29,128,473	27,807,547	1,320,926	53,580	435,348	10,611	5,233	21,815,837	1,785,836	16,955,699
1952.....	33,093,843	31,617,156	1,476,687	52,699	437,581	11,272	5,256	21,614,196	1,934,433	19,514,490
1953.....	36,926,384	33,953,196	2,967,188	52,727	450,835	11,618	5,307	21,222,706	2,042,921	21,553,387
1954.....	38,203,590	33,203,942	4,999,648	46,284	434,178	10,629	5,015	19,906,354	2,105,513	21,550,372
1955.....	39,320,960	32,501,844	6,819,116	48,067	438,692	10,852	5,024	20,067,424	2,238,433	23,264,851
1956.....	40,720,213	33,688,888	7,031,325	48,062	442,891	10,833	4,934	20,381,641	2,429,893	24,295,308

¹ Excludes commission operators. ² Includes messages to and from vessels on the Great Lakes and the St. Lawrence River and messages to and from stations. ³ Excludes relayed messages and includes paid wireless messages to and from ships in the Gulf of St. Lawrence and on the Atlantic Ocean.

Submarine Cables.—Four cable companies operate submarine cables landing in Canada: Canadian Overseas Telecommunication Corporation; the Commercial Cable Company; the Western Union Telegraph Company; and the French Telegraph Cable Company. These companies operate to stations in the United Kingdom, Ireland, the United States, Bermuda, Australia, New Zealand, and St. Pierre and Miquelon Islands. The number of cables operating between connected stations and the length of cables are given in the following table.

* Sections 1 and 2 of this Part were revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics. The Division issues annual reports dealing with telegraph and telephone statistics. Section 3 was revised in the Telecommunications Branch, Department of Transport, Ottawa.

2.—Cable Landings in Canada 1956

Company and Station	Cables	Nautical Miles
	No.	No.
Canadian Overseas Telecommunication Corporation—		
Halifax, N.S. to St. John's, Nfld.—St. John's, Nfld. to Porthcurnow, England.....	1	2,656
Halifax, N.S. to Horta, Azores—Horta, Azores to Porthcurnow, England.....	1	3,078
Bamfield, B.C. to Sydney, Australia.....	1	7,830
Bamfield, B.C. to Auckland, New Zealand.....	1	6,748
Halifax, N.S. to Bermuda.....	1	874
Sydney Mines, N.S. via Newfoundland, to Oban, Scotland.....	1 ¹	2,280
Commercial Cable Company—		
Canso, N.S. to St. John's, Nfld.....	2	912
Canso, N.S. to Far Rockaway, N.Y., U.S.A.....	3	2,892
Canso, N.S. to Horta, Fayal, Azores—Horta, Azores to Waterville, Ireland.....	2	3,420
St. John's, Nfld. to Waterville, Ireland.....	4	7,261
St. John's, Nfld. to Far Rockaway, N.Y., U.S.A.....	2	2,592
Western Union Telegraph Company—		
North Sydney, N.S. to St. Pierre and Miquelon Islands.....	3	599
North Sydney, N.S. to Island Cove, Nfld.....	2	635
North Sydney, N.S. to Colinet, Nfld.....	1	323
Canso, N.S. to Duxbury, Mass., U.S.A.....	1	575
North Sydney, N.S. to Canso, N.S.....	1	118
Hearts Content, Nfld. to Valentia, Ireland.....	3	5,661
Bay Roberts, Nfld. to Penzance, England.....	4	8,467
Bay Roberts, Nfld. to Horta, Azores.....	1	1,343
Bay Roberts, Nfld. to Hammel, N.Y., U.S.A.....	2	2,774
Placentia, Nfld. to St. Pierre and Miquelon Islands.....	2	250
Islands Cove Hut, Nfld. to St. Pierre and Miquelon Islands.....	1	130
French Telegraph Cable Company—		
Canso, N.S. to St. Pierre and Miquelon Islands.....	1	257

¹ Telephone cable in service since Sept. 25, 1956.

Section 2.—Telephones

The tremendous growth of Canadian telephone systems since the War has been matched by their technological development. Automation in the Canadian telephone industry began on a large scale about thirty years ago with the introduction of dial telephones and step-by-step equipment for automatic completion of local calls. About 77 p.c. of all telephones in Canada are now served by this method and the proportion is increasing steadily. Crossbar, a type of automatic switching equipment faster and more flexible than step-by-step, is being introduced in several Ontario and Quebec communities with heavy calling volumes. The same basic type of crossbar switching, employed in the regional long-distance offices at Toronto and Montreal, enables operators to dial calls directly to telephones in many distant cities across the Continent. This system will be extended to most major centres in Canada and the United States, and the addition of automatic call accounting machines will make it possible for customers themselves to dial a large percentage of long-distance calls.

These developments in the automatic switching of long-distance calls are accompanied by advances in the provision of transmission channels on a trans-Canada basis. The first inter-system microwave radio relay chain, between Toronto and Winnipeg, was completed in 1956 by The Bell Telephone Company of Canada and the Manitoba Telephone System. Extensions eastward and westward, with Bell's existing Ontario-Quebec chain as a nucleus, will provide coast-to-coast microwave facilities for telephone and television purposes by mid-1958.

Long-distance services make possible the interconnection of practically any telephone across the country with any other, or with any of the 60,000,000 telephones in the United States. Connections are also available with more than 100 other countries and territories. Within Canada, long-distance service is provided by the separate systems and, on a nationwide scale, by seven major systems which constitute the Trans-Canada Telephone System.

Canadian manufacturing companies produce the greater part of the telephone equipment and materials used in this country. Dependable high quality is maintained and desired uniformity is made possible in operating and maintenance practices across the country.

Telephone Systems.—Telephone systems operating in Canada in 1956 numbered 2,661 as compared with 2,739 in 1955. There was a drop in both the number of small co-operative systems in rural districts and the number of shareholder-owned companies, the former decreasing to 2,172 from 2,214 and the latter to 349 from 373. The largest of the stock companies were The Bell Telephone Company of Canada, operating in Ontario and Quebec with 61 p.c. of all the telephones in Canada, and the British Columbia Telephone Company with 9 p.c. of the total. Four private companies served the Atlantic Provinces, and three systems operated by the respective provincial governments served the Prairie Provinces.

Telephone Equipment.—Because of the insistent demand for increased telephone service, the number of telephones in use in Canada has more than doubled in the past ten years. At Dec. 31, 1956, there were 4,499,325 telephones in service compared with 4,151,678 in 1955 and 2,230 597 in 1947. During 1956 a total of 347,647 telephones were installed, over 56,000 above the previous high in 1955 when installations numbered 291,409. The number of residential telephones and the number of business telephones each rose by 9 p.c. in 1956. Rural telephones were up 6 p.c. and pay telephones 4 p.c. Several exchanges were converted to dial operation in 1956 and by the end of the year 77 p.c. of all telephones in Canada were dial-operated as compared with 74 p.c. in 1955. Pole-line milage and wire milage continue to increase year after year.

3.—Milages of Pole-Line and Wire and Number of Telephones in Use 1947-56

NOTE.—Figures from 1911 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Systems	Pole-Line Milage ¹	Milage of Wire	Telephones in Use					
				Business	Resi- dential	Rural ²	Public Pay	Total	Per 100 Popu- lation
	No.	miles	miles	No.	No.	No.	No.	No.	No.
1947.....	3,056	232,054	7,285,681	645,154	1,194,840	354,779	35,824	2,230,597	17.7
1948.....	2,992	235,379	7,913,068	701,869	1,328,373	383,227	38,399	2,451,868	19.0
1949.....	2,971	242,147	8,725,760	762,294	1,481,876	414,061	41,381	2,699,612	19.9
1950.....	2,912	245,443	9,488,467	813,352	1,611,759	447,691	44,290	2,917,092	21.1
1951.....	2,904	249,638	10,330,751	864,015	1,735,355	467,171	47,225	3,113,766	22.2
1952.....	2,888	253,420	11,265,903	920,269	1,888,889	492,753	50,455	3,352,366	23.2
1953.....	2,793	257,059	12,307,070	988,489	2,053,944	513,061	50,913	3,606,407	24.4
1954.....	2,788	257,444	13,357,289	1,053,852	2,213,154	538,660	54,603	3,860,269	25.4
1955.....	2,739	259,784	14,758,160	1,132,436	2,408,959	552,838	57,445	4,151,678	26.6
1956.....	2,661	269,303	16,410,897	1,229,150	2,625,787	584,484	59,904	4,499,325	28.0

¹ Includes underground conduits and buried cable. exchange lines having more than four parties.

² Includes telephones on rural exchange lines and urban

The density of telephones in the different provinces is influenced by the urbanization of the population—the number of telephones used for business purposes is much greater in cities and towns than in rural areas.

4.—Telephones in Use by Province 1955 and 1956

Year and Province or Territory	On Individual Lines		On 2- and 4-Party Lines		On Rural Lines		Private Branch Exchanges and Extensions		Public Pay Stations	Total	Telephones per 100 Population
	Business	Residence	Business	Residence	Business	Residence	Business	Residence			
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1955											
Nfld.....	7,547	5,614	175	11,341	50	892	5,330	1,999	348	33,296	8.1
P.E.I.....	1,588	2,467	133	3,433	291	3,860	1,684	634	89	14,179	13.1
N.S.....	12,008	41,626	630	31,468	1,882	22,410	18,207	8,419	1,728	138,378	20.3
N.B.....	8,206	19,518	1,109	31,624	1,495	17,248	14,538	5,317	1,306	100,361	18.0
Que.....	101,594	240,293	8,618	355,036	16,314	91,678	195,890	54,126	21,128	1,084,677	24.0
Ont.....	152,634	313,900	10,922	616,906	10,464	178,557	307,363	115,421	23,000	1,729,257	33.4
Man.....	19,643	57,173	300	64,690	4,687	26,485	30,744	8,080	2,314	214,116	25.2
Sask.....	20,607	75,363	881	4,767	4,339	55,291	17,657	4,106	1,055	184,066	20.7
Alta.....	39,642	125,665	17	385	1,613	26,452	42,082	10,894	1,587	248,337	23.3
B.C.....	42,754	11,245	378	172,569	5,300	83,469	69,502	14,697	4,890	404,804	31.0
Yukon.....	20	6	33	87	25	36	—	—	—	207	2.1
Totals.....	406,243	892,960	23,196	1,292,306	46,460	506,378	702,997	223,693	57,445	4,151,678	26.6
1956											
Nfld.....	7,784	6,621	207	13,383	57	1,039	5,827	2,428	400	37,746	8.9
P.E.I.....	1,673	2,807	120	3,275	305	3,936	1,821	706	95	14,738	14.0
N.S.....	12,571	45,979	562	29,857	2,063	23,355	19,396	9,263	1,866	144,912	20.8
N.B.....	8,764	21,328	1,067	32,532	1,279	18,492	15,679	6,200	1,349	106,690	18.8
Que.....	108,304	275,954	8,134	377,559	14,096	97,093	216,915	67,984	21,403	1,187,442	25.6
Ont.....	162,007	390,995	9,576 ¹	609,413	12,297	188,134	336,929	134,772	24,043	1,868,166	35.2
Man.....	20,297	60,762	372	69,339	4,823	26,809	32,531	8,553	2,294	225,780	26.1
Sask.....	21,216	84,754	185	2,588	3,966	56,690	19,534	4,644	1,183	194,760	21.7
Alta.....	48,632	132,733	18	246	1,430	26,234	44,575	12,789	1,685	268,342	24.6
B.C.....	46,370	13,536	350	185,752	5,005	97,332	77,675	18,947	5,586	450,553	33.3
Yukon.....	25	6	34	82	28	21	—	—	—	196	1.8
Totals.....	437,643	1,035,475	20,625	1,324,026	45,349	539,135	770,882	266,256	59,904	4,499,325	28.2

¹ Ontario four-party telephones included under Rural Lines.

Telephone Calls.—The major telephone systems make counts of completed calls on representative days throughout the year and on this basis estimate the number of local conversations which, added to the actual count of long-distance calls, give their total volume of business. Estimates are included for the small systems which do not count completed calls. The number of completed calls on all systems in 1956 was estimated at 7,764,805,000 compared with 6,961,476,000 calls in 1955, or an average of 1,726 calls per telephone and 483 calls per person compared with 1,677 calls per telephone and 446 per person in 1955.

Extended area service which eliminates toll charges between adjacent communities was introduced in more centres across Canada but, despite this service, long-distance calls increased by 15,326,000 from 1954 to 1955 and by 18,193,000 from 1955 to 1956.

5.—Local and Long-Distance Calls and Average Calls per Telephone and per Capita 1947-56

NOTE.—Figures from 1928 will be found in the corresponding tables of previous Year Books beginning with the 1939 edition.

Year	Local Calls	Long-Distance Calls	Total Calls	Total Calls per Capita ¹	Average Calls per Telephone		
					Local	Long-Distance	Total
	No.	No.	No.	No.	No.	No.	No.
1947.....	3,760,569,000	82,695,000	3,843,264,000	306	1,686	37.1	1,723
1948.....	4,025,342,000	91,875,000	4,117,217,000	321	1,642	37.5	1,680
1949.....	4,454,024,000	105,232,000	4,559,256,000	339	1,650	39.0	1,689
1950.....	4,894,719,000	117,892,000	5,012,611,000	366	1,678	40.4	1,718
1951.....	5,146,238,000	127,406,000	5,273,644,000	376	1,653	40.9	1,694
1952.....	5,482,973,000	126,721,000	5,609,694,000	389	1,635	37.8	1,673
1953.....	5,952,756,000	131,899,000	6,084,655,000	412	1,650	36.6	1,687
1954.....	6,209,771,000	137,761,000	6,347,532,000	418	1,608	35.7	1,644
1955.....	6,808,389,000	153,087,000	6,961,476,000	446	1,640	36.8	1,677
1956.....	7,593,525,000	171,280,000	7,764,805,000	483	1,688	38.0	1,726

¹ Per capita figures are based on official estimates of population given at p. 119.

Finances, Employees and Earnings.—The steady increases in capitalization, revenue and expenditure of telephone companies together with the increases in number of employees and salaries and wages paid are shown for the years 1947-56 in Table 6. Provincial figures for 1955 and 1956 are given in Table 7.

6.—Financial Statistics of Telephone Systems 1947-56

NOTE.—Figures from 1911 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Capital Stock	Funded Debt	Cost of Property and Equipment	Income	Expenditure	Net Income	Em- ployees	Salaries and Wages
	\$	\$	\$	\$	\$	\$	No.	\$
1947.....	183,469,710	171,810,793	521,183,575	134,666,857	116,623,149	18,043,708	35,578	66,623,983
1948.....	194,465,399	238,762,614	615,941,540	150,533,349	131,570,434	18,962,915	38,851	77,497,980
1949.....	229,208,219	267,987,289	716,519,781	169,113,048	153,066,308	16,046,740	42,326	90,634,477
1950.....	274,088,405	286,752,783	806,826,198	198,823,483	178,193,661	20,629,822	45,396	102,093,078
1951.....	286,003,119	307,623,351	909,581,399	240,762,657	213,824,471	26,938,186	47,387	117,677,652
1952.....	335,575,292	378,628,224	1,027,527,807	279,001,814	244,506,402	34,495,412	48,207	131,370,832
1953.....	398,198,697	450,511,233	1,152,309,749	310,833,599	269,817,828	41,015,771	50,540	145,109,934
1954.....	418,287,016	498,231,715	1,301,545,688	340,623,170	296,384,292	44,238,878	51,929	159,329,238
1955.....	467,026,669	521,336,006	1,470,679,433	376,716,651	328,880,674	47,835,977	55,673	173,922,973
1956.....	549,266,657	583,795,407	1,672,363,570	422,370,206	366,117,634	56,252,572	60,121	193,992,142

7.—Financial Statistics of Telephone Systems by Province 1955 and 1956

Year and Province	Capital Liability	Cost of Property and Equipment	Income	Expenditure	Em- ployees	Salaries and Wages
	\$	\$	\$	\$	No.	\$
1955						
Newfoundland.....	5,284,275	7,568,743	1,491,983	1,194,239	336	630,785
Prince Edward Island....	2,730,286	3,811,413	986,030	862,463	144	304,552
Nova Scotia.....	34,755,000	44,223,846	11,065,553	9,430,525	1,774	4,429,166
New Brunswick.....	30,343,530	39,780,444	9,096,372	7,697,558	1,494	3,708,920
Quebec.....	627,503,783 ¹	388,041,215	256,721,038 ¹	223,526,203 ¹	15,594	53,365,653
Ontario.....	14,643,812	607,848,356	9,225,127	7,870,331	22,048	69,995,324
Manitoba.....	55,756,093	83,214,578	13,562,157	13,229,452	3,173	8,497,110
Saskatchewan.....	55,749,521	75,418,346	16,248,199	13,745,333	1,862 ²	5,573,530 ²
Alberta.....	59,388,900	87,508,845	20,563,676	18,141,001	3,141	9,006,119
British Columbia.....	102,142,475	133,230,447	37,740,684	33,166,924	6,103	18,397,210
Yukon.....	65,000	33,200	15,832	16,645	4	14,604
Totals, 1955.....	998,362,675	1,470,679,433	376,716,651	328,880,674	55,673	173,922,973
1956						
Newfoundland.....	7,087,125	9,226,970	1,817,218	1,310,649	384	735,584
Prince Edward Island....	3,112,529	4,257,948	980,291	957,901	159	385,865
Nova Scotia.....	38,234,592	49,796,226	12,078,818	10,226,172	1,838	4,884,351
New Brunswick.....	35,484,523	46,624,588	10,023,491	8,607,014	1,609	4,197,119
Quebec.....	715,194,636 ¹	439,530,522	287,595,908 ¹	251,325,598 ¹	16,853	59,710,920
Ontario.....	16,929,421	681,001,461	9,871,608	8,306,497	24,086	78,565,599
Manitoba.....	62,735,069	95,214,785	16,122,476	14,405,628	3,213	9,034,565
Saskatchewan.....	63,833,661	87,060,388	18,098,725	15,311,982	1,948 ²	6,178,253 ²
Alberta.....	64,909,289	98,896,213	23,088,309	18,659,270	3,371	9,930,496
British Columbia.....	125,476,219	160,721,269	42,677,731	36,988,374	6,657	20,355,002
Yukon.....	65,000	33,200	15,631	18,549	3	14,374
Totals, 1956.....	1,133,062,064	1,672,363,570	422,370,206	366,117,634	60,121	193,992,142

¹ Statistics of The Bell Telephone Company for both Quebec and Ontario are included under Quebec.

² Excludes wages and employees for rural systems.

Section 3.—Federal Government Telegraph and Telephone Service

There are some scattered settlements throughout Canada where commercial telephone and telegraph companies do not furnish service, yet where adequate communication must be provided in the public interest. The Federal Government, therefore, through the Minister of Transport, has assumed responsibility for such services as: telegraph and telephone connections to scattered settlements on Cape Breton Island; cable services to islands in the Bay of Fundy and Prince Edward Island; certain telegraph lines and a telephone service in the Peace River district of Alberta; and a telephone service on the Magdalen Islands and in other areas of the Province of Quebec.

At Dec. 31, 1956, the telegraph and telephone service comprised 1,745 miles of pole line, 3,244 miles of open wire, 30 miles of aerial cable, 95 miles of submarine cable, and eight radio stations. It provided telephone service for 1,732 subscribers with telephones, of whom 444 were served through lines connected to other company exchanges. There were 89,064 telegraph messages handled by this service in 1956, operating expenses were \$444,871 and net revenues \$129,817.

The Northwest Communication System is operated for the Government by the Canadian National Telegraphs. It extends northwesterly from Edmonton to the Yukon-Alaska border and comprises 1,859 miles of pole line, 71,550 circuit-miles for telegraph purposes and 35,354 circuit-miles for telephone connections. The System provides commercial telephone and telegraph services at airports, settlements and communities in

northwest Canada, including Whitehorse, Y.T., and Dawson Creek and Fort St. John, B.C. During 1956, 130,669 telephone calls and 80,781 telegraph messages were handled, revenue amounted to \$2,410,402 and expenditure for operating and maintaining the System was \$1,893,862.

PART III.—RADIO COMMUNICATIONS*

Section 1.—Federal Radio Communication Services

The administration and regulation of radio communication in Canada is carried out by the Telecommunications Branch of the Department of Transport. The radio activities of the Branch may be summarized as follows: (1) the administration of national and international radio laws and regulations and of regional agreements, involving the issuance of radio licences, inspection of radio stations, certification of radio equipment, examination of operators, allocation and monitoring of frequencies, study of radio wave propagation, compilation and settling of international accounts for radio messages, investigation and suppression of inductive interference to radio reception; and (2) construction, maintenance and operation of radio communication stations and radio aids to marine and air navigation. (See also pp. 894-896.)

National and international radio laws and regulations include: the Canadian Broadcasting Act, the Radio Act and Regulations made thereunder; the International Telecommunication Convention and Radio Regulations annexed thereto; the Inter-American Radiocommunications Convention; the Inter-American Arrangement Concerning Radiocommunications; the North American Regional Broadcasting Agreement; those Articles of the International Civil Aviation Convention applicable to aeronautical radio requirements; the Canada Shipping Act and Radio Regulations for Ship Stations issued thereunder, and that part of the International Convention for the Safety of Life at Sea applicable to radio requirements for ships.

Licensing and Operation.—In all branches of radio, basic control is exercised over the right to establish a station, assignment of frequencies, operator standards, operating procedure, and general regulations concerning the manner in which radio stations are used.

Under the Broadcasting Act reasonably complete and technically acceptable applications for licences to establish broadcasting stations, or for modification of existing stations, are referred to the Canadian Broadcasting Corporation for its recommendations to the Minister of Transport before being finally dealt with by the Department of Transport. The Canadian Broadcasting Corporation also controls the linking-up of stations that form networks and, in addition, the character of programs being broadcast. With these exceptions, the control of broadcasting stations is carried out by the Telecommunications Branch of the Department of Transport.

The standard broadcast band is crowded with stations that are capable of interfering with one another over the entire North American region, particularly at night. A plan for the accommodation of the largest number of stations with the least interference was evolved as a result of extensive studies conducted by Canada, Cuba, the Dominican Republic, Haiti, the Bahama Islands, Mexico, and the United States and was embodied in the North American Regional Broadcasting Agreement.

Before a new standard broadcasting station can be licensed or before modifications can be made in an existing station, engineering briefs covering the selection or change of frequency, amount of power and design of the directional antenna system must be approved by the Department of Transport and notification sent to the signatory countries of the North American Regional Broadcasting Agreement. After the establishment or change is completed, proof of performance must be submitted to establish that the actual installation is in accordance with the approved plan.

* Except where otherwise indicated, this Part has been revised or prepared by the Department of Transport, Ottawa.

The allocation of high frequencies and their efficient utilization requires reasonably accurate information on the transmission properties of the ionosphere which vary with the season, the sunspot cycle and other factors. This information is obtained from hourly measurements of the ionosphere made at some 70 points throughout the world and analyzed and correlated by the Radio Physics Laboratory, Defence Research Board, Ottawa, and by the United States Bureau of Standards at Washington, D.C. The Canadian measurement stations are located at St John's, Nfld.; Resolute Bay, Cornwallis Island and Baker Lake, N.W.T.; Fort Chimo, Que.; Churchill and Headingly, Man.; Ottawa, Ont.; and Prince Rupert, B.C. Eight frequency monitoring stations are maintained at suitable points across Canada to check operating frequencies of all classes of radio stations to ensure that they do not depart from the assigned frequency by an amount greater than that permitted by the international conventions.

Under the Safety of Life at Sea Convention and the Canada Shipping Act, most passenger ships and larger cargo ships must be fitted with radiotelegraph or radiotelephone equipment, primarily for distress use. Approval is given for each make and model of equipment that comes up to the required standard and, in addition, the ship station as a whole is inspected before the licence is issued and periodically thereafter. Foreign ships are subject to inspection before sailing from Canadian ports to ensure that they conform with the requirements of the Safety of Life at Sea Convention. Also, certain passenger, cargo, and other ships plying the Great Lakes are inspected to ensure compliance with the requirements of the Agreement between Canada and the United States for the Promotion of Safety on the Great Lakes by means of Radio.

Standards have been developed for the installation of aircraft radio stations specifying in detail the techniques and materials that may be used, to ensure that such stations will satisfactorily perform the function for which they are intended. Rigid standards are also in effect for the environmental testing of individual units of aircraft radio equipment, and approval is given to manufacturers for each model of equipment which has been demonstrated to meet the requirements. Inspections of radio stations aboard civil aircraft of all operational categories are carried out at prescribed periods. In-flight inspections of the radio communications and navigational aspects of proposed new air carrier operations, encompassing both land and oceanic routes, are also made as required.

Marine and aeronautical radio operator standards and related regulations are covered by international agreement. The International Telecommunication Convention prescribes the qualifications for radio operators on mobile stations and the Radio Act provides that all operators, both commercial and amateur, must pass examinations to prove their ability to operate the respective classes of stations on which they are engaged. Competent operators are required on all classes of stations in order that the technical requirements prescribed under international agreement be adhered to closely; they are particularly essential on ship and aircraft stations in the interests of safety of life.

Investigation and Suppression of Inductive Interference.—Under the Radio Act the use of electrical equipment that will produce harmful interference to broadcast reception is not permitted. The Telecommunications Branch of the Department of Transport maintains 60 cars equipped for measuring and locating sources of interference to broadcast reception. In addition to locating the sources of interference, advice is given as to how it may be suppressed or eliminated. These cars operate from the permanent radio inspection offices located in 27 cities throughout Canada. During the year 1956, 11,355 sources of interference were located and suppression was obtained in all but a few cases. Power lines were the largest single source of interference, constituting 37 p.c. of the total. Apart from cases of actual interference, the Branch also gives technical advice and assistance to manufacturers of electrical apparatus, in reducing to acceptable levels the radio noise (interference) produced by such apparatus.

Industrial, scientific and medical apparatus is brought under strict control in accordance with Regulations for Controlling Radio Interference and under the authority of the Radio Act. Regulations require that radiation from such apparatus, which is liable

to cause interference to radio communications, must be suppressed either by shielding or by replacing the apparatus with a non-interfering type. The Department of Transport conducts type tests on diathermy and industrial heating apparatus submitted by manufacturers, and the types that fulfil the requirements of the Department are listed as non-interfering. The radiation from all such sources on communication frequencies must not exceed the tolerances specified by the Canadian Standards Association.

Radio Revenue.—Regulations concerning the rendering and settlement of international accounts are contained in the International Telecommunication Convention and Regulations. Sources of revenue include commercial ship and inter-station messages handled by Departmental ships and land stations, radiotelegrams exchanged by foreign ships through Canadian coast stations, private commercial traffic via Departmental airway radio stations, and radio services rendered to aircraft of private airline companies by such stations. During the year ended Mar. 31, 1956, there were 1,119,987 messages handled over marine stations consisting of 43,670,839 words. The revenue therefrom, together with revenue from aeronautical messages and from licence fees, examination fees, fines and forfeitures, rentals, etc., are given in Table 1.

1.—Radio Revenue Collected by the Department of Transport, Year Ended Mar. 31, 1956

Stations	Revenue
	\$
Marine Messages	211,880
East Coast.....	105,220
Great Lakes.....	29,172
West Coast.....	55,324
Hudson Bay and Strait.....	9,081
Premium revenue.....	13,083
Aeronautical Messages	430,009
Private, commercial and aeronautical messages.....	55,437
Radio service to airline companies.....	374,572
Other Radio Revenue	420,916
Examination fees—Radiotelegraph Operators' Certificates of Proficiency.....	1,703
Fines and forfeitures under the Radio Act.....	196
Licence fees (excl. private commercial broadcasting stations).....	205,488
Rentals.....	184,501
Miscellaneous.....	38,028
Totals	1,071,805
Collected from the issuance of private commercial broadcasting stations licences.....	355,884

THE TELECOMMUNICATIONS BRANCH OF THE DEPARTMENT OF TRANSPORT

Radio in Canada traces its origin to the year 1900 when wireless telegraphy was introduced and placed under the jurisdiction of the Department of Public Works. The first commercial radio circuit was established between Chateau Bay, Que., and Belle Isle in the Strait of Belle Isle in 1901, replacing an underwater cable which was difficult to maintain. In the first days of radio there did not appear to be any necessity for special legislative control, but the growth of this new medium of communication was very rapid and the Wireless Telegraph Act of 1905 became the first legislation in Canada controlling radio communication.

Radio regulation and radio coast station services were under the jurisdiction of the Department of Public Works until 1909 at which time they were transferred to the Department of Marine and Fisheries where they remained until 1930, with the exception of the period 1914-1922 when they were under the jurisdiction of the Department of Naval

Services. In 1930, when a separate Marine portfolio was established, they became a Branch of that Department and then in 1936 a Division of the Air Services Branch of the newly formed Department of Transport. In 1936 an aviation radio service was organized within the Radio Division, and to it in 1948 was transferred the Government Telegraph and Telephone Service, which had been under the jurisdiction of the Department of Public Works since 1879. In 1950, the name was changed to Telecommunications Division, and later to Telecommunications Branch.

The present responsibilities of the Telecommunications Branch include the operation of radio aids to marine and air navigation, the regulation of all Canadian radio operations, the regulation of overseas cable communication services, the administration of the international telegraph regulations and operation of certain communication services for the public and for the handling of meteorological messages.

Since the end of the War in 1945 a number of radio aids to air navigation have been introduced, many of which were the result of wartime development, although much additional work was necessary to make them acceptable for service to civil aircraft. Through the medium of the International Civil Aviation Organization (ICAO), established in December 1944, it has been possible for participating administrations to reach agreement on desired systems and procedures. Probably no other single factor has contributed so much to the expansion of co-ordinated aviation telecommunications. Typical of new systems are the Instrument Landing Systems (ILS), Ground Control Approach (GCA), the Very High Frequency Omni-directional Ranges (VOR), and Surveillance Radar (see pp. 897-898). Also of importance to air navigation has been the development of integrated communication networks by landline and radio for the transmission of air traffic control and general airline operational messages. As these networks become more extensive and messages flow between a larger number of points, complicated relay stations are needed to keep message handling-time low. One of these relay stations has recently been constructed in the new signal centre at Gander, Nfld.

For all point-to-point communication systems, the trend has been toward automatic methods, as evident by the conversion of many radio circuits to radio teletype operation. In the field of international air-ground communication, the important development has been the changeover from radiotelegraph to radiotelephone. For the handling of meteorological data, facsimile has been introduced. Maps are transmitted by this means over both commercial and Department of Transport radio circuits, many of which have been especially designed for the purpose.

During the past ten years emphasis has been given to the modernizing of radio equipment used in aiding marine navigation. The development of efficient shipborne radar has minimized to some extent the need for new types of short-range navigation aid stations on shore. However, better medium-distance aid became necessary and was satisfied by the continuation and improvement of the wartime LORAN system. In ship-shore communications there has been a changeover from radiotelegraph to radiotelephone and a substantial expansion of the latter service for inland and coastal shipping. Of major significance in this connection is the Great Lakes Agreement with the United States respecting radiotelephone operation.

The number of radio stations regulated under the Radio Act and the Canada Shipping Act increased from 8,762 at Mar. 31, 1947, to 26,998 at Mar. 31, 1955. At the end of the War there was a large pent-up demand for new radio systems, both public and private. International planning, which is conducted by the International Telecommunications Union, was postponed during the war period, and at the first postwar Conference held at Atlantic City in 1947 all of the vast technological development that had taken place before and during the War had to be considered. Since the 1947 meeting there has been a series of subsidiary conferences notable among which was the Extraordinary Administrative Radio Conference in Geneva in 1951, at which a major step in international frequency planning was taken through the development of an implementation program for the allocation tables adopted at Atlantic City. Implementation of the new frequency arrangement is nearing completion.

The major developments in radio services in the past ten years include: broadcasting—both sound radio and television; telephone and telegraph company microwave systems; and mobile radio service for fire and police departments, taxis, railroads, power and oil distribution, construction operations, etc. The major build-up in military radio defence systems has also been most significant, particularly those installed in Canada by United States forces, because these are fully subject to the provisions of the Radio Act.

Most radio systems are becoming increasingly complex as new types of equipment are installed. For instance, the radio relay apparatus used by telephone and telegraph companies is capable of providing hundreds of circuits on one radio transmitter. Sound radio broadcasting has made use of complex directional antennae to permit the establishment of many more stations than previously thought possible with the limited number of channels available.

It may be noted that it has been the policy in recent years to turn, wherever possible, government-owned telegraph facilities over to private communication interests operating in the areas concerned. Some expansion of public communication services has taken place in other areas, but largely as a by-product at stations established for other purposes.

In addition to the radio services under its own control the Department of Transport is concerned with the regulation of the radio services of other government departments, public and private radio services including radio stations on ships and aircraft registered in Canada, with special reference to the assignment of suitable frequencies and the application of techniques compatible with frequency planning. The following Federal Government departments and agencies use radio to facilitate their operations: the Department of National Defence, the Department of Agriculture, the Department of Citizenship and Immigration, the Department of Fisheries, the Department of Mines and Technical Surveys, the Department of National Health and Welfare, the Department of National Revenue, the Department of Public Works, the Department of Northern Affairs and National Resources, the National Research Council and the Royal Canadian Mounted Police.

Subsection 1.—Radio Services

Services of the Telecommunications Branch of the Department of Transport in aid of marine and aeronautical navigation and meteorological communications are described in this subsection. Details may be obtained on request from the Department of Transport, Ottawa.

Radio Aids to Marine Navigation.—Radio aids to marine navigation are provided for about 4,000 radio-equipped Canadian vessels and almost as many foreign ships using Canadian waters. A safety and communications service for shipping is provided covering the East and West Coasts, the Great Lakes, the St. Lawrence River and Gulf, Hudson Bay and Hudson Strait.

Coast Radio Stations.—Coast stations provide a safety watch and communications service for ships at sea and provide, as well, regularly broadcast weather reports, storm warnings and notices of dangers to navigation. The stations carry out communications by radiotelegraph and/or radiotelephone, and many of them provide connections to land telephone lines so that ships may communicate directly with any telephone subscriber. At Halifax (CFH) and Vancouver (CKN), shortwave facilities are furnished for world-wide communications. These stations participate in the Commonwealth long-range ship communication scheme.

The coast stations on Hudson Bay and Hudson Strait, in addition to the regular services, provide commercial communications for posts of the Hudson's Bay Company and various prospecting and development organizations, make weather observations, handle administrative traffic and assist aircraft with information, landing conditions and direction finding bearings.

Direction Finding Service.—Coast radio direction finding stations, operated on the Atlantic Coast and on Hudson Bay and Strait, enable ships to obtain a line of bearing from the station. No charge is made for this service.

A chain of automatic radiobeacon stations is also maintained to provide a navigational aid to mariners by transmitting signals on which bearings may be taken by ships. These stations are arranged, where possible, in groups of three, transmitting on a common frequency but in proper time sequence so as to avoid interfering with one another. A navigator may thus obtain three bearings within three consecutive minutes and fix his location. A number of radiobeacons are synchronized with fog alarms at the same point, for distance finding in foggy weather. Ships may also request the transmission of signals from the coast stations for direction finding purposes.

Loran Stations.—Loran is a long-range radio aid to marine and air navigation which provides accurate fixes at distances up to 600 miles by day and 1,500 miles by night. Two Loran stations operate in Nova Scotia, three in Newfoundland and one on the West Coast. These stations, in conjunction with Loran stations of the United States Coast Guard, give service to ships and aircraft plying the North Atlantic and Pacific Oceans.

Radar.—It has become general practice to equip merchant ships with radar, a valuable aid to marine navigation, and many important buoys are fitted with radar reflectors to increase their radar visibility. Two shore-based radar installations are in operation—one at Camperdown near the mouth of Halifax Harbour and the other on the Lion's Gate Bridge across the entrance to Vancouver Harbour.

Miscellaneous Services.—Lighthouses, particularly at locations where they would otherwise be completely cut off from summoning help in case of illness, are provided with low-power transceivers for use in emergencies. Lighthouse radiophone stations are organized into groups working into a control station.

Ships at sea may obtain medical advice from any coast station. The messages are delivered to the port medical officer of the Department of National Health and Welfare and replies are transmitted to the ship free of charge.

Radio and radar equipment used aboard vessels of the federal marine, pilotage and canal services, on vessels operated by the Department of Fisheries, the Department of Mines and Technical Surveys and the Department of National Revenue and on Canadian National Railway ferries is maintained by the Telecommunications Branch of the Department of Transport.

Radio Aids to Aeronautical Navigation.—Radio aids to air navigation are provided from coast to coast and from the Canada-United States border to the Arctic along and off the airways, and are used by many Canadian and foreign air carriers flying over Canadian territory. Trained engineers and technicians are assigned to six district offices located at Vancouver, B.C., Edmonton, Alta., Winnipeg, Man., Toronto, Ont., Montreal, Que., and Moncton, N.B., to carry out the construction and efficient operation of facilities.

Radio Ranges.—The principal radio aid to air navigation provided by the Department of Transport is the low-frequency radio range station, located approximately every hundred miles along airways. It provides specific track guidance to pilots by means of audible signals and the signals may also be used for the purpose of obtaining direction finding bearings. In addition, radiotelephone communications are provided between ground and aircraft, by which means pilots may obtain weather data, air traffic control instructions and other information concerning the safety of flights.

There are now being constructed a number of very high frequency omni-directional ranges (VOR). Unlike the existing radio range stations, this type of facility does not limit the aircraft using the station to one of four distinct courses, but enables the pilot to select his desired course. A six-station omni-range airway between Montreal, Que., and Windsor, Ont., with standard 200-watt installations located at Montreal, Ottawa, Stirling, Toronto, London and Windsor is in operation. Work is progressing on six additional stations for a high-altitude airway from Toronto, Ont., to Winnipeg, Man., and on one isolated station at Gander, Nfld.

Beacons, Markers, etc.—Aeronautical radiobeacon stations provide radio signals with which pilots may use their direction finding equipment to obtain relative directional bearings. Fan markers, operating on very high frequencies, are usually placed on an airway so as to inform the pilot when he may safely lose altitude after passing high terrain or to indicate accurately the distance from an airport. Station location markers are similar to fan markers except that the signal radiated is such that aircraft may receive the same indication irrespective of the direction of flight. They are installed at the same location as a radio range to enable a pilot to determine when he is exactly over the station, thus obtaining definite indication of position. Station location markers are installed at most radio range sites.

Radar.—Long-range (150 nautical-mile) surveillance radars are being installed at 15 major airports from Halifax to Vancouver for air traffic control purposes. Short-range (40 nautical-mile) radars will also be installed at Montreal, Toronto, Winnipeg and Vancouver airports. A 50-mile range surveillance radar at Gander forms part of a complete ground controlled approach radar facility.

Instrument Landing Systems.—Instrument landing systems provide radio signals which, when received by special radio equipment aboard aircraft, permit pilots to approach airports for landing during periods of very low visibility. An installation normally consists of a localizer transmitter providing lateral guidance to the runway, a glide path transmitter for slope guidance to the approach end of the runway, two marker transmitters giving distance indications from the runway and a low-power radiobeacon (compass locator) to assist in holding procedures and lining up on the localizer course. The localizer and marker transmitters operate on very high frequencies, the glide path on ultra high frequencies and the compass locators on low and medium frequencies. Twenty-six instrument landing systems are in operation.

Aeronautical Communications Stations.—To assist in providing communication between aircraft and ground, radio stations are located at strategic points across the country, including the Arctic. These stations, operating for the most part on high frequencies, provide communication to both domestic and international air carriers. The international communications stations form a major contribution on the part of Canada to international aviation. They may be grouped as follows: (1) communication for meteorological services; (2) communication for the air traffic control services; and (3) communication for the benefit of the airline operating agencies, with their aircraft and between their despatch offices.

Meteorological Communications Stations.—Six stations whose primary function is weather reporting are located at strategic points throughout the country from coast to coast and into the Far North; some are located in remote areas where radio is the only means of communication.

Supplementing the facsimile wire-line services, the transmission of weather maps is extended by radio to points in northern Canada that cannot be served by wire lines.

Subsection 2.—External Telecommunication Services

The Canadian Overseas Telecommunication Corporation was established in 1950 to maintain and operate, in Canada and elsewhere, external telecommunication services for the conduct of public communications by cable, radiotelegraph and radiotelephone, and any other means of telecommunication between Canada and any other place, and between Newfoundland and any other part of Canada; to make use of all developments in cable and radio transmission and reception for external telecommunication services; to conduct investigations and research with the object of improving the telecommunication service generally and to co-ordinate Canada's external telecommunication services with the telecommunication services of other parts of the Commonwealth.

Soon after its establishment, the Corporation embarked on a program of expansion of overseas services designed to meet anticipated requirements of the future. In November 1953, the Corporation, on behalf of Canada, entered into an agreement with interests in the United States for the construction and maintenance of a transatlantic telephone cable. The laying of the first section of the cable started from Clarendville, Nfld., in June 1955, and the whole system was placed in service on Sept. 25, 1956. Total cost of the project amounted to approximately \$40,000,000 of which the Corporation's share was about one-tenth. A second transatlantic cable will be laid by 1961 and will be financed by the United Kingdom and Canadian Governments. It will provide 60 telephone circuits, each capable of being transposed into 48 telegraph circuits.

Transpacific radiotelephone and radiotelegraph services began operating from Vancouver to Australia and New Zealand on Nov. 1, 1956. Direct radiotelegraph service to Japan commenced in June 1957. Augmentation of overseas radiotelegraph facilities at Yamachiche and Drummondville, Que., became necessary as a result of the expansion of existing services and the introduction of new direct radiotelegraph circuits.

In December 1956, the Corporation initiated and brought into service International Telex, an overseas teleprinter switching system by means of which the user can teletype directly to a correspondent. Service is available across Canada.

Section 2.—Other Government, Miscellaneous and Commercial Radio Communication Services

Radio services have been established by all provincial governments, mainly for police, highway and forestry protection purposes.

Municipal government departments have steadily increased their use of radio to facilitate operations. This increase is noted in all municipal services using radio as a medium of communication with vehicles, i.e., police, fire, engineering, hydro, etc. In addition, the trend toward expansion in the employment of radio for urban mobile communication has shown no signs of abating. Such services as taxi, heavy construction, ready-mix concrete, oil pipeline construction and operation, veterinarian and rural medical have participated extensively in this increase. Public mobile radio relay message services (telephone answering service) have also been licensed to operate in most of the larger cities.

Public utilities, power companies, provincial power commissions, oil exploration and mineral development organizations have considerably expanded their use of radio in both urban mobile and point-to-point radio fields.

Commercial Radio Communication Services.—The North-West Telephone Company operates a radiotelephone service between points in British Columbia not hitherto served by telephone. Under licences granted by the Department of Transport, the Company has established a number of permanent public commercial radiotelephone stations that are authorized to provide communication to private commercial radiotelephone stations located at isolated points in the Province. The Company is also licensed to establish limited coast stations at Lulu Island, Powell River, Vancouver, Nanaimo, Victoria, Harrison Lake, Parksville, Alert Bay, Campbell River, Hardwicke Island, Halberg, Sumas Mountain, and Prince Rupert, B.C., to provide a ship-to-shore service. These stations, used in conjunction with the ordinary telephone exchange, provide a duplex-radiotelephone service to isolated points and to certain ships at sea. They also provide a limited amount of service to stations of the land mobile category.

The North-West Telephone Company is also licensed to provide emergency radiotelephone communication at any point in British Columbia and to carry out tests for extending the existing radiotelephone service throughout the Province.

To provide trans-river communication in the lower St. Lawrence area, the following companies operate stations in the Province of Quebec at La Malbaie, Tadoussac, Rivière-du-Loup, Rimouski, Matane, Montmagny, St. Antoine, Île aux Grues, Cap Chat, Forestville, Trinity Bay, Sept-Îles, Baie Comeau, Clarke City, Gaspé Copper Mines, Mont Louis, Chicoutimi, and Tour à Pica: La Compagnie de Téléphone de Charlevoix et Saguenay, La Compagnie de Téléphone de Kamouraska, the Quebec Telephone Corporation, Gulf of St. Lawrence Telephone Company and La Compagnie du Téléphone Saguenay.

The wire facilities between Saint John, N.B., and Digby, N.S., between Saint John, N.B., and Halifax, N.S., between Red Head, N.B., and Mount Hanley, N.S., between Lutz Mountain (Moncton), N.B., and Egmont, P.E.I., and between Charlottetown, P.E.I., and New Glasgow, N.S., are supplemented by radiotelephone connections.

Stations at Saint John, Red Head, and Lutz Mountain (Moncton) are operated by the New Brunswick Telephone Company. The terminals at Digby, Halifax, New Glasgow and Mount Hanley are operated by the Maritime Telephone and Telegraph Company. The stations at Charlottetown and Egmont are operated by the Island Telephone Company.

The Bell Telephone Company of Canada provides a land mobile terminal radiotelephone service at numerous points in Ontario and operates a microwave link between Toronto and Ottawa, Ont., and Montreal, Que., which carries television programs and is capable of providing many additional telephone circuits. Radio links are also maintained between Pelee Island and Leamington, Ont., and across the St. Lawrence between Sorel and Joliette, Que.

The Canadian National Railway Company operates an extensive radiotelegraph and radiotelephone service in Newfoundland including links between Table Mountain, Nfld., Cape North, N.S., and New Waterford, N.S. This Company is also authorized to provide a limited coast-station service at Port aux Basques, Nfld.

The Canadian National Railway Company and the Canadian Pacific Railway Company have jointly established microwave circuits between Toronto and Windsor, and between Montreal and Quebec City.

The Avalon Telephone Company operates public commercial stations in Newfoundland to supplement its wire lines and to provide telephonic communication with isolated communities.

The Manitoba Telephone System operates radiotelephone links involving stations at the following points: Riverton, Manigotagan, Hecla Island, Gimli, Norway House, Bissett, Great Falls, The Pas, Snow Lake and Winnipeg. In addition, the System operates stations at Gimli, The Pas and Norway House to provide terminal service for ships operating on Lake Winnipeg.

Norwesto Communications Limited operates a public commercial radiotelephone service to provide telephonic communication to privately owned stations at isolated points throughout the northwestern part of the Province of Ontario. Stations are located at Kenora, Red Lake, Ball Lake, Sioux Narrows, Dryden, Sioux Lookout, Minaki and Redditt, which are used in conjunction with the ordinary telephone exchanges.

The Red Lake Telephone Company operates a public commercial radiotelephone station at Madsen, Ont., to provide a connection between the local wire telephone system and the Norwesto Communications Limited network.

The Okanagan Telephone Company operates a public radiotelephone service between Revelstoke and Arrowhead, B.C., and a public commercial terminal station at Kelowna to provide telephonic communication to privately owned stations at isolated points in the Kelowna area.

Section 3.—Broadcasting in Canada*

Broadcasting in Canada as it has developed over a period of more than thirty-five years is a combination of public and private enterprise. Under the Canadian Broadcasting Act (R.S.C. 1952, c. 32), authority for broadcasting service is vested in a Board of eleven Governors, appointed by the Governor General in Council and chosen to give representation to the principal geographical divisions of Canada. The Board is directly responsible to Parliament for carrying on a national broadcasting service in Canada and for the policies of the Canadian Broadcasting Corporation. It also administers and supervises regulations pertaining to broadcasting which are observed by both the CBC and privately owned stations.

As of Mar. 31, 1957, there were 22 CBC radio stations and ten CBC television stations; 203 privately owned radio stations and 30 privately owned television stations. All the privately owned television stations and many of the privately owned radio stations operate in partnership with the CBC in helping to distribute national radio and television services over five networks operated by the CBC—in radio, the Trans-Canada, Dominion and French networks, and in television, the English and French networks.

The privately owned stations are subject to licensing control by the Department of Transport and to CBC regulations authorized by Parliament. Their primary purpose is to provide community service in the locality where they are situated. Many stations are located in small urban centres and serve, as well, the larger population located in the surrounding rural areas. Others serve cities and their surrounding towns and rural areas, providing alternative programs to those of the CBC. In sparsely populated areas where privately owned stations would not be economical the CBC provides service through unattended, low-power relay transmitters. Many of the privately owned stations form an integral part of the national networks as outlets for national service programming.

The Chairman of the Board of Governors is required to devote the whole of his time to the performance of his duties under the Act. Members of the Board are not paid and must take an oath of office disclaiming any personal interests in broadcasting, and review broadcasting activities in Canada generally in the interests of the country as a whole. Policy is determined and supervised by the Board but day-to-day operations and executive direction of the CBC are conducted by the General Manager. The CBC is responsible for the regulations controlling the establishment of networks and the proportion of time that may be devoted to advertising in broadcast programs, but it neither exercises nor authorizes any private station to exercise on its behalf, censorship of any broadcast program. The responsibility of observing regulations rests with individual station management.

The general principles of this system, as established by Parliament, have been approved by fourteen Parliamentary Committees and two Royal Commissions.

Radio Broadcasting Facilities.—As stated above, the CBC operates three networks: the Trans-Canada and Dominion networks serving English language audiences from the Atlantic to the Pacific, and the French language network extending from Moncton, N.B., to Edmonton, Alta. As at Mar. 31, 1957, the Trans-Canada network was made up of 26 basic stations—13 CBC-owned and 13 privately owned. There were 19 supplementary stations, four of which were CBC-owned Newfoundland stations. The Dominion network consisted of 31 basic stations of which 30 were privately owned. Nineteen supplementary privately owned stations also received Dominion network service. The French network had five basic stations, four of which were CBC-owned and one privately owned, and 20 privately owned affiliated supplementary stations.

Table 2 lists the broadcasting stations of the CBC radio networks.

* Prepared under the direction of J. A. Ouimet, General Manager, Canadian Broadcasting Corporation, Ottawa. The history of the Canadian Broadcasting Corporation is given in the 1947 Year Book, pp. 737-740.

2.—Broadcasting Stations of CBC Radio Networks as at Mar. 31, 1957

NOTE.—The stations marked with an asterisk (*) are CBC-owned. The symbols used in the Power column have the following meanings: DA-1, one directional antenna both day and night; DA-2, two directional antennae, one in daylight, the other at night; DA-N, single directional antenna used at night only. Wattage of some stations differs between day and night as shown.

Station Location	Frequency	Power	Station Location	Frequency	Power
	kc.	watts		kc.	watts
Trans-Canada Basic Network—			Dominion Basic Network—		
*CBI Sydney.....	1,140	5,000	concl.		
*CBH Halifax.....	1,330	100	CFCO Chatham.....	630	1,000 DA
*CBA Sackville.....	1,070	50,000	CFPA Port Arthur.....	1,230	250
CHSJ Saint John.....	1,150	5,000 DA-N	CJRL Kenora.....	1,220	1,000
CFNB Fredericton.....	550	5,000 DA-N	CKRC Winnipeg.....	630	5,000 DA-N
*CBM Montreal.....	940	50,000	CKX Brandon.....	1,150	1,000
*CBO Ottawa.....	910	5,000 DA	CJGX Yorkton.....	940	10,000 D
CKWS Kingston.....	960	5,000 DA			1,000 N
*CBL Toronto.....	740	50,000	CKBI Prince Albert.....	900	10,000 DA-2
CFCH North Bay.....	600	1,000 DA	CFQC Saskatoon.....	600	5,000 DA-N
CJKL Kirkland Lake.....	560	5,000 DA	CHAB Moose Jaw.....	800	5,000 DA
CKGB Timmins.....	680	5,000 DA-N	CKRM Regina.....	980	5,000 DA-N
CKSO Sudbury.....	790	5,000 DA-N	CFRN Edmonton.....	1,260	5,000
*CBE Windsor.....	1,550	10,000 DA	CFCN Calgary.....	1,060	10,000 DA-N
CJIC Sault Ste. Marie.....	1,490	250	CHWK Chilliwack.....	1,270	1,000 DA
CKPR Fort William.....	580	1,000	CJOR Vancouver.....	600	5,000 DA
*CBW Winnipeg.....	990	50,000	CJVI Victoria.....	900	5,000 DA-1
*CBK Regina.....	540	50,000			
*CBX Edmonton.....	1,010	50,000	Dominion Supplementary—		
*CBXA Edmonton.....	740	250	CHML Hamilton.....	900	5,000 DA-N
CJOC Lethbridge.....	1,220	10,000 D	CKTB St. Catharines.....	620	1,000 DA
		5,000 DA-N	CFOR Orillia.....	1,570	5,000 D
CFJC Kamloops.....	910	1,000			1,000 N
CKOV Kelowna.....	630	1,000	CHNO Sudbury.....	900	1,000 DA-N
CJAT Trail.....	610	1,000	CHAT Medicine Hat.....	1,270	1,000 DA
*CBU Vancouver.....	690	10,000	CJTB Vernon.....	940	1,000
*CFPR Prince Rupert.....	1,240	250	CFOB Fort Frances.....	800	1,000 D
					500 N
Trans-Canada Supplementary—			CKCV Quebec.....	1,280	1,000 DA-N
*CBN St. John's.....	640	10,000	CKSF Cornwall.....	1,230	250
*CBY Corner Brook.....	790	1,000	CJBQ Belleville.....	800	1,000 DA-1
*CBG Gander.....	1,450	250	CKCR Kitchener.....	1,490	250
*CBT Grand Falls.....	990	1,000	CJCS Stratford.....	1,240	250
CKBW Bridgewater.....	1,000	1,000 DA-N	CKPC Brantford.....	1,380	1,000 DA-N
CKMR Newcastle.....	790	1,000 DA-1	CKNX Wingham.....	920	1,000 DA-N
CJQC Quebec.....	1,340	250	CFOS Owen Sound.....	1,470	1,000 DA-N
CKOK Hamilton.....	1,150	5,000 DA	CKLW Windsor.....	800	50,000 DA
CHLO St. Thomas.....	680	1,000 DA	CKRD Red Deer.....	850	1,000
CHOK Sarnia.....	1,070	5,000 D	CKLC Kingston.....	1,380	1,000
		1,000 DA-N	CKOK Penticton.....	800	1,000 D
CFAR Flin Flon.....	590	1,000			500 N
CFGP Grande Prairie.....	1,050	5,000 DA-1	French Basic Network—		
CKLN Nelson.....	1,240	250	*CBJ Chicoutimi.....	1,580	10,000 DA
CKPG Prince George.....	550	250	*CBV Quebec.....	980	5,000
CJDC Dawson Creek.....	1,350	1,000	*CBF Montreal.....	690	50,000
CJCA Edmonton.....	930	5,000 DA-N	*CBAF Moncton.....	1,300	5,000 DA-1
CKKC Regina.....	620	5,000 DA-N	CHNC New Carlisle.....	610	5,000 DA
CFAC Calgary.....	960	5,000 DA-N			
CKEC New Glasgow.....	1,230	250	French Supplementary—		
Dominion Basic Network—			CJEM Edmundston.....	1,380	1,000 DA
CJCB Sydney.....	1,270	5,000 D	CJBR Rimouski.....	900	10,000 DA-N
		1,000 N	CHLT Sherbrooke.....	900	1,000 DA-N
CHNS Halifax.....	960	5,000 DA-N	CHGB Ste. Anne-de-la-	1,350	1,000 D
CJFX Antigonish.....	580	5,000 DA	Pocatière.....		250 N
CJLS Yarmouth.....	1,340	250	CKCH Hull.....	970	5,000 DA-1
CFCY Charlottetown.....	630	5,000 DA-N	CJEF Rivière-du-Loup.....	1,400	250
CKCW Moncton.....	1,220	10,000 DA-N	CKVD Val d'Or.....	1,230	250
CFBC Saint John.....	930	5,000 DA	CHAD Amos.....	1,340	250
CKNB Campbellton.....	950	1,000 DA	CKRN Rouyn.....	1,400	250
CKTS Sherbrooke.....	1,240	250	CKLS La Sarre.....	1,240	250
CFCE Montreal.....	600	5,000 DA	CKLD Thetford Mines.....	1,230	250
CKOY Ottawa.....	1,310	5,000 D	CFCL Timmins.....	580	1,000 DA
		1,000 DA-N	CKSB St. Boniface.....	1,250	1,000 DA
CHOV Pembroke.....	1,350	1,000 DA	CHFA Edmonton.....	680	5,000 DA
CFJR Brockville.....	1,450	250	CFNS Saskatoon.....	1,170	1,000 DA-1
CHEX Peterborough.....	1,430	1,000 DA	CFRG Gravelbourg.....	710	5,000 D
*CHZ Toronto.....	860	50,000	CHNO Sudbury.....	900	1,000 DA-N
CFPL London.....	980	5,000 DA	CKBL Matane.....	1,250	5,000 DA-1
			CKVM Ville Marie.....	710	1,000 DA-N
			CKRB Ville St. Georges.....	1,400	250

Television Broadcasting Facilities.—As at Mar. 31, 1957, there were 34 television broadcasting stations in operation on the English network (eight of which were CBC-owned) and three under construction. On the French network, six stations were in operation (two of which were CBC-owned) and one was under construction. These stations were located and powered as follows:—

3.—Broadcasting Stations of CBC Television Networks as at Mar. 31, 1957

NOTE.—The stations marked with an asterisk (*) are CBC-owned.

Station Location	Channel	Power		Station Location	Channel	Power	
		Video	Audio			Video	Audio
		kw.	kw.			kw.	kw.
English Network—				English Network—concluded			
CJON-TV St. John's.....	6	21	11	CFRN-TV Edmonton.....	3	180.3	90.43
*CFLA Goose Bay.....	8	0.348	0.174	CHCT-TV Calgary.....	2	100	50
*CFSN Harmon Field.....	8	0.490	0.245	*CBUT Vancouver.....	2	47.6	25.4
CJCB-TV Sydney.....	4	100	60	CKNX-TV Wingham.....	8	20	12
*CBHT Halifax.....	3	56.5	33.8	CFCY-TV Charlottetown.....	13	38.6	19.3
CHSJ-TV Saint John.....	4	100	50	CKGN-TV North Bay.....	10	28.5	14.25
CKCW-TV Moncton.....	2	25	15	CFCL-TV Timmins.....	6	18.5	9.25
CKML-TV Quebec.....	5	5.6	2.8	CJLH-TV Lethbridge.....	7	102.8	57.5
*CBMT Montreal.....	6	43.8	26.2	CHEK Victoria.....	6	1.8	0.9
*CBOT Ottawa.....	4	50.1	26.7				
CHEX-TV Peterborough.....	12	102	61.2	Under Construction—			
CKWS-TV Kingston.....	11	101	60.6	CJOX-TV Argentina.....	10	0.190	0.097
*CBLT Toronto.....	9	99.5	53.5	CHAT-TV Medicine Hat.....	6	4.78	2.39
CKVR-TV Barrie.....	3	14	7	CFCR-TV Kamloops.....	4	0.10	0.05
CHCH-TV Hamilton.....	11	100	60				
CKCO-TV Kitchener.....	13	31.4	16.9	French Network—			
CFPL-TV London.....	10	325	195	CJBR-TV Rimouski.....	3	34.0	19.4
CKLW-TV Windsor.....	9	178	107	CFCM-TV Quebec.....	4	12.65	6.33
CKSO-TV Sudbury.....	5	1.74	0.87	*CBFT Montreal.....	2	100	50
CJIC-TV Sault Ste. Marie.....	2	28	15	*CBOT Ottawa.....	9	31	17
CFCT-TV Port Arthur.....	2	5.10	2.55	CKRS-TV Jonquière.....	12	20	10
*CBWT Winnipeg.....	4	56.2	33.7	CHLT-TV Sherbrooke.....	7	170	100
CKX-TV Brandon.....	5	19.3	9.65				
CFQC-TV Saskatoon.....	8	100	60	Under Construction—			
CKCK-TV Regina.....	2	100	53.5	CKRN-TV Rouyn.....	4	50	25

It was estimated that at the end of March 1957 more than 86 p.c. of all Canadians were within reach of the national television system. Microwave facilities linking television stations from coast to coast for instantaneous telecasting of programs are under construction and will extend from coast to coast by mid-1958.

When television broadcasting began in September 1952, 146,000 television sets were in use in Canada. One year later the number had tripled and by March 1957 more than 2,550,000 receivers were in use in Canadian homes.

Canadian Broadcasting Corporation Service.—The Corporation's Head Office is located at Ottawa and provides over-all direction for the English and French language television and radio services through the CBC's seven operations divisions: British Columbia; Prairies; Ontario and English networks; Quebec and French networks; Maritimes; Newfoundland; and the International Service. To give expression to varying interests across Canada, the CBC maintains offices and production facilities at St. John's, Nfld., Sydney and Halifax, N.S., Moncton, N.B., Chicoutimi, Quebec and Montreal, Que., Ottawa, Toronto and Windsor, Ont., Winnipeg, Man., Regina, Sask., Edmonton, Alta., and Vancouver and Prince Rupert, B.C.

Domestic Radio Program Service.—During the year ended Mar. 31, 1957, 82,329 programs representing 25,415 hours of broadcasting were presented over the CBC Trans-Canada, Dominion and French networks. Of the total broadcasting hours in 1954-55, 75 p.c. was scheduled on the Trans-Canada network; the Dominion network released 4.3 p.c. and the remainder was released on the French network.

The CBC originated and produced 92.5 p.c. of its network broadcasts. Of the remainder, 1 p.c. came from private stations and 6.5 p.c. were exchange programs from the United States and the British Broadcasting Corporation. An analysis of network programs by categories for 1956-57 shows that, as in previous years, a large proportion of CBC radio network time was devoted to music—an estimated 44 p.c. News and weather ranked next in order of broadcast time with 12 p.c. Table 4 presents an estimate of the hours of radio programs by category. The figures are based on programs on all three CBC radio networks, 'live', recorded, or recorded for later presentation. They do not include the 'delayed' presentation of programs that are transmitted at different times by different sections of the network to meet the convenience of listeners in the various time zones. However, they do include regional programming presented on sections of the network exclusively for listeners in the areas served by such regional breakdowns of the network. The classifications in this table are based on the predominant function of each program although many programs serve more than one interest at the same time.

4.—Classification of CBC Radio Programs, Year Ended Mar. 31, 1957

Class of Program	Hours	Distribution of Hours	Class of Program	Hours	Distribution of Hours
	No.	p.c.		No.	p.c.
Music, light.....	7,822	30.8	School, youth educational.....	540	2.1
Music, serious.....	3,506	13.8	Political, controversial.....	406	1.6
News, weather.....	2,997	11.8	Miscellaneous information.....	237	0.9
Miscellaneous entertainment.....	2,580	10.2	Other countries.....	236	0.9
Drama.....	1,797	7.0	Social and human relations.....	179	0.7
Farm and fisheries.....	1,285	5.1	Science and nature.....	42	0.2
Canadian ideas and heritage.....	1,171	4.7	Other.....	104	0.4
Religious.....	971	3.8			
Home and hobby.....	878	3.4			
Sports.....	664	2.6	Totals.....	25,415	100.0

Domestic Television Program Service.—During the year ended Mar. 31, 1957, the CBC English-language television network presented 2,511 hours of programming. Of this, 58 p.c. was produced by CBC, 38 p.c. was drawn from sources in the United States, 2 p.c. from non-CBC sources in Canada, and 2 p.c. from the United Kingdom and other countries. Of the 2,794 hours presented by the CBC French-language television network, 70 p.c. originated with the CBC, 3 p.c. with other Canadian sources, and 17 p.c. with sources in France. The remaining 10 p.c. was procured in the United States, the United Kingdom and other countries.

5.—Classification of CBC Television Programs, Year Ended Mar. 31, 1957

Class of Program	Hours	Distribution of Hours	Class of Program	Hours	Distribution of Hours
	No.	p.c.		No.	p.c.
Drama.....	1,927	36.3	Science, nature.....	123	2.3
Variety, other entertainment.....	944	17.8	School, youth educational.....	104	2.0
Sports.....	609	11.5	Political, controversial.....	94	1.8
News, weather.....	314	6.0	Home and hobby.....	92	1.7
Canadian ideas and heritage.....	202	3.8	Music, serious.....	68	1.3
Music, light.....	178	3.3	Farm and fisheries.....	58	1.1
Other countries.....	165	3.1	Other.....	20	0.3
Social and human relations.....	138	2.6			
Miscellaneous information.....	136	2.6			
Religion.....	133	2.5	Totals.....	5,304	100.0

Radio and Television Talent.—The CBC is the main single outlet for Canadian talent in the fields of music, drama and other entertainment. In the year ended Mar. 31, 1957, a total of 14,514 free-lance artists contributed to the Corporation's programs. During the year, the CBC spent approximately \$11,000,000 for talent—\$3,500,000 for radio and \$7,500,000 for television. Of the total, \$2,400,000 was for scripts, performing rights, music and musical arrangements. The remainder was in the form of direct fees to musicians, singers, actors, and other performers. These figures cover 'outside' or non-staff talent and do not include CBC personnel in such categories as producers and directors, scenery, graphics and costume designers, and film editors and commentators.

CBC International Service (Shortwave).—The International Service, operated by the Canadian Broadcasting Corporation on behalf of the Government of Canada, is financed separately from CBC's national radio and television service through annual grants by Parliament. Headquarters and studios are in the Radio Canada Building at Montreal and the Service's two 50-kw. shortwave transmitters are in Sackville, N.B., 600 miles from Montreal.

The International Service was inaugurated on Feb. 25, 1945, and the first programs to Europe were broadcast mainly for Canadian Armed Force personnel. Later, the scope was broadened to give listeners in other lands a picture of life in Canada and to explain Canada's part in the United Nations and NATO. News and news commentary are the core of the program service and great emphasis is placed on the broadcasting of news bulletins to those who live behind the iron curtain. Shortwave broadcasts are now on the air some 92 hours a week in the following languages—English, French, German, Dutch, Italian, Spanish, Portuguese (for Brazil), Danish, Norwegian, Swedish, Czech, Slovak, Russian, Ukrainian, Polish and Hungarian. Programs are also prepared regularly on disc or tape and shipped to Austria, Greece and Finland for transmission by the radio facilities of those countries. The shortwave transmitters at Sackville are also used to broadcast news and other programs to people living in Canada's Far North beyond the signal of the domestic networks. Broadcasts beamed to Europe in the English and French languages are regularly relayed over Station CAE, the Canadian Army radio station in Europe. In addition to the regular shortwave programs, the International Service provides the Canadian Army station with broadcasts of special events from Canada.

In addition to its regular schedule of shortwave broadcasting, the International Service provides programs for use on the domestic stations and networks of countries all over the world. In the main, three types of programs are provided to external radio organizations: programs relayed by shortwave for immediate or almost-immediate rebroadcast; recorded broadcasts on tape or disc, usually for only one outlet; and transcriptions on processed disc for wide distribution. The third category—transcriptions—is made up of recorded music and spoken-word programs (talks, documentaries, etc.) in the English, French and Spanish languages. International Services sometimes exchange regular programs with other countries.

More than 300,000 letters have been received from listeners since the start of the service. The International Service replies in the language of the letter-writer and forwards printed information on a great number of subjects. Seven times yearly the International Service publishes an illustrated program schedule which is printed in the languages of the shortwave programs and contains information, times and frequencies of the International Service shortwave broadcasts. It goes to 180,000 individual listeners in all parts of the world.

Canadian Broadcasting Corporation Finances.—The operations for the year ended Mar. 31, 1957, resulted in an excess of expenditure over income of \$1,561,211 after providing \$1,969,754 for depreciation. The surplus of the Radio and Integrated Services was \$202,299 as compared to a deficit of \$1,763,510 for the Television Service.

The Corporation's income from all sources was \$10,346,563 higher than the previous year; contributing to this was an increase of \$2,438,200 in net revenue from commercial broadcasting activities of the Television Service. The increase in total revenue was offset by an advance in expenditures of \$10,549,153, attributed to the development of the national television service and to the general rise in costs experienced by all industries.

The cash and investment position as at Mar. 31, 1957, was \$4,829,022 lower than at Mar. 31, 1956. Working capital was \$17,993,620 at the later date as compared with \$22,518,050 at the earlier date. The decrease was partially accounted for by expenditures of \$552,885 for extensions and improvements to broadcasting facilities for the Radio and Integrated Services and \$4,041,261 for the Television Service.

There were no loans during the year from the Government of Canada. Payments on the principal of loans granted previously amounted to \$101,038 for the Radio and Integrated Services and \$36,975 for the Television Service.

Statutory payments to the Corporation representing the equivalent of the excise tax on the sale of radio and television receivers and associated parts amounted to \$18,923,029 compared to \$22,799,955 for the previous year. Parliament extended the grant previously authorized for the five years ended Mar. 31, 1956, to the Radio Broadcasting Service toward the anticipated operating deficit and capital expenditures. A grant for similar purposes was provided for the Television Service.

The International Service's net operating expenditures of \$1,566,087 for the year ended Mar. 31, 1957, are not considered as chargeable to the CBC because grants and payments from the Government of Canada are used to serve only listeners within Canada.

6.—Income and Expenditures of the CBC, Year Ended Mar. 31, 1957

Item	Radio and Integrated Services	Television Service	Total
	\$	\$	\$
Net Income	14,511,082	34,777,883	49,288,965
Grants under Parliamentary Appropriations.....	6,250,000	12,000,000	18,250,000
Statutory grant under Sect. 14-4 of the Act.....	6,336,840	12,586,189	18,923,029
Commercial broadcasting.....	1,338,302	9,841,638	11,179,940
Broadcasting licence fees.....	308,250	84,000	392,250
Interest on investments.....	78,063	227,477	305,540
Profit on sale of bonds.....	14,480	29,795	44,275
Miscellaneous.....	185,147	8,784	193,931
Expenditure	13,705,415	35,175,007	48,880,422
Programs.....	11,967,530	19,689,784	31,657,314
Engineering.....	3,536,654	5,915,249	9,451,903
Network transmission services.....	1,663,211	1,452,334	3,115,545
Administration.....	1,855,089	—	1,855,089
Commercial division.....	730,625	—	730,625
Press and information.....	920,470	—	920,470
Interest on loans.....	90,322	831,403	921,725
Amortization of improvements to properties held under lease.....	104,972	122,779	227,751
Integrated services (shared).....	-7,163,458	7,163,458	—
Depreciation.....	603,368	1,366,386	1,969,754
Excess of Income over Expenditure	202,299	—	—
Excess of Expenditure over Income	—	1,763,510	1,561,211

Privately Owned Stations.—As stated previously, privately owned broadcasting stations are subject to the Radio Act, the Canadian Broadcasting Act and Regulations made thereunder, and to the provisions of the Radio Regulations annexed to the International Telecommunication Convention and Regional Agreements in effect in Canada. Since Mar. 31, 1923, private commercial broadcasting station licences have been required by Government regulation and both sound and television broadcasting stations are now authorized by this class of licence.

Any application for a licence to establish a new private station or for an increase in power, change of channel, or change of location of any existing private station must be referred by the Minister of Transport to the Canadian Broadcasting Corporation; the Corporation after giving public notice thereof in the *Canada Gazette* will make such recommendations to the Minister of Transport as it may deem fit. The approval of the Governor in Council must be obtained before any licence for a new private station is issued. Private commercial broadcasting station licences are conditional upon the ownership or control of the stations, and the shares of capital stock of licensed companies in certain instances may not be transferred without the permission of the Minister of Transport having been first obtained upon the recommendation of the Canadian Broadcasting Corporation. Proof of performance statements showing public service, community service and light programming are filed annually with the Canadian Broadcasting Corporation. Organizational and financial statements are filed annually, on a confidential basis, with the Department of Transport.

The first sound broadcasting in Canada took place when a privately owned communications company in Montreal was authorized to transmit programs on an experimental basis during the latter part of 1918 and in the winter evenings of 1919 over its Station XWA. Under the first licensing regulations in the year ended Mar. 31, 1923, 34 licences were issued. By Mar. 31, 1957, the number had increased to 203, of which 169 were AM standard band stations, 26 were frequency modulated stations and eight were shortwave stations. Of the 169 standard band stations, two were operating with a power of 50,000 watts, ten with 10,000 watts, 50 with 5,000 watts, 63 with 1,000 watts, 42 with 250 watts and two with 100 watts.

A privately owned broadcasting station is required to pay to the Receiver General of Canada an annual licence fee based on the gross revenue for licence fee computation for the fiscal year of the station. Because the fiscal years of the privately owned stations end at different dates it is difficult to estimate the gross revenue of all stations for any one year. The Report of the Royal Commission on Broadcasting published in 1957 indicates that gross sales for 144 broadcasting stations amounted to approximately \$36,000,000 in 1955, all of which was obtained from commercial advertising.

The first privately owned television broadcasting station in Canada at Sudbury, Ont., was authorized to commence scheduled broadcasting on Oct. 20, 1953. By Mar. 31, 1957, 30 privately owned television stations were in operation (see Table 3).

International Agreements.—In 1937 a conference was held at Havana, Cuba, to review the broadcasting situation in the North American region and to develop a workable plan which would permit the growth of the broadcasting industry. The product resulting from the deliberations of that conference was the treaty known as the North American Regional Broadcasting Agreement which came into effect in 1941 and was extended by an instrument known as the *modus vivendi* or interim agreement signed at Washington in 1946. In 1949 and 1950, conferences were held at Montreal and Washington, and a new North American Regional Broadcasting Agreement was drafted in December 1950 which has been implemented as an administrative arrangement.

The Canadian-United States Television Agreement provides for the assignment and utilization of 82 television channels between 54 and 890 mc/s along the border between Canada and the United States of America, within an area of 250 miles on either side of the International Boundary. This Agreement provides that all station assignments within its scope shall be made in accordance with the Agreement and shall have an effective radiated power in any vertical or azimuthal plane not in excess of 100,000 watts for Channels 2 to 6, of 325,000 watts for Channels 7 to 13 and of 1,000,000 watts for Channels 14 to 83.

PART IV.—THE POST OFFICE

The Canada Post Office Department was created at the time of Confederation in 1867 by the Canada Post Office Act to superintend and manage the postal service of Canada under the direction of a Postmaster General. For almost a century before Confederation, postal services in the Canadian provinces had been controlled by the British Postmaster General and administered by his deputies. Under the French régime a courier service had been organized as early as 1703 between Quebec, Three Rivers and Montreal. In 1734 a post road was constructed over the same route and post houses, complete with post horses and vehicles, were established for the use of travellers. In 1851 the control of their post offices was assumed by the different provinces of British North America and at Confederation these systems merged to form the Canada Post Office.

Functions.—The basic tasks of the Canadian Postal Service are to receive, convey and deliver postal matter with security and despatch. In discharging these duties it maintains post offices and utilizes air, railway, land and water transportation facilities. Associated functions include the sale of stamps and other articles of postage, the registration of letters and other mail for despatch, the insuring of parcels, the accounting for COD articles, and the transaction of money order and Post Office Savings Bank business. Because of its widespread facilities, it has been found expedient for the Post Office to assist other government departments in the performance of certain tasks including the sale of unemployment insurance stamps, the collection of government annuity payments, the distribution of income tax forms and Civil Service employment application forms, and the displaying of government posters.

Post offices are established wherever the population warrants. Those in rural areas and small urban centres transact all of the functions of the city office. In larger urban areas postal stations and sub-post offices have full functions similar to the main post office, including a general delivery service, lock-box delivery and letter carrier delivery to the surrounding area.

At Mar. 31, 1957, there were 11,879 post offices in operation compared with 11,996 in 1956. Letter carrier delivery, performed in 140 urban centres, employs over 6,400 uniformed letter carriers. Postage paid in 1956-57 by means of postage stamps amounted to \$77,735,659 as compared with \$75,559,106 in 1956. Post office money orders, issued for any amount not exceeding \$100 and payable in almost any country of the world, are sold at more than 8,000 post offices. Orders payable in Canada only, for amounts not exceeding \$16 are sold at more than 3,000 additional post offices. Post Office Savings Banks operate in all parts of the country and, on Mar. 31, 1957, had total deposits of \$35,918,499.

Organization.—The Canada Post Office includes an Operating Service and Headquarters at Ottawa. The Operating Service is organized into five regions each under a Regional Director, who is the field representative of the Deputy Postmaster General. There are five Headquarters Branches: Administration, Operations, Transportation, Financial, and Personnel, each under a Director. Operating and secretarial features in the operating field affecting the post offices and local mail services in urban centres are taken care of by the local postmaster. District office functions relating to services in the district and all inspections and investigations are under District Directors of Postal Services in strategic centres across the country.

Postal service is provided in Canada from Newfoundland to the west coast of Vancouver Island and from Pelee Island, Ont. (the most southerly inhabited point of Canada) to settlements and missions far within the Arctic. Canada's airmail system provides several transcontinental flights daily and constitutes a great air artery from St. John's, Nfld., to Victoria, B.C., intersected by branch lines and connecting lines radiating to every quarter and linking up with the United States airmail system. Since July 1, 1948, all first class domestic mail up to and including one ounce in weight has been carried by air between one Canadian point and another, whenever delivery can thus be expedited.

On Apr. 1, 1954, this service was extended to first class items up to and including eight ounces in weight. Air stage service provides the sole means of communication with the outside for many areas in the hinterland. There were approximately 35,700 miles of airmail and air stage routes in Canada in 1957 as compared with 32,447 miles in 1956.

The principal means of mail transportation is the railway mail service that operates along about 30,260 miles of track and, in 1957, covered over 43,500,000 service miles. The railway mail service employed a staff of 1,190 mail clerks to prepare the mails for prompt delivery and dispatch while *en route* in the railway mail cars. Like its airmail service, Canada's railway mail service is one of the most extensive in the world.

The rural mail delivery organization provides direct postal facilities to residents in the rural sections of the country; approximately 5,399 rural mail routes were in operation in 1957, involving over 130,000 route-miles and serving 465,180 rural mail boxes. Rural mail routes are generally circular in pattern and average about 24 miles in length. Considerable progress has been made towards the development of mail service by means of group boxes—a service intended for the more densely populated rural areas and for suburban residents not within the area of letter carrier delivery service. About 3,848 side services were in operation in 1957 to transport mail between post offices, railway stations, steamer wharves and airports, and 2,145 stage services operated to convey mail to and from post offices not located on railway lines. Transportation of mail by motor vehicle on highways is being developed and over 270 such services are in operation. Many of these services have replaced or reduced conveyance by rail. A local exchange of mails between offices on the route is effected by way-mail wallet. In 1957 there were approximately 792 city mail services transporting mail to and from post offices, postal stations and sub-post offices, collecting mail from street letter-boxes and delivering parcel post. In all, about 12,500 land-mail service couriers are employed and travel in the neighbourhood of 50,000,000 miles annually. Land mail services are performed under a contract system, the contracts being awarded to the person submitting the lowest tender and competent to provide all the requisite equipment.

Coastal mail service to the more populous centres as well as to many isolated points is conducted by 17 contractors who operate as far north along the West Coast as Alaska and on the East Coast to the northern part of Labrador.

The increase in postal business is one of the impressive features of Canada's economic development during the past ten years. Gross revenue for the year ended Mar. 31, 1957, reached an all-time high.

Post Office Statistics.—Tables 1, 2 and 3 give the numbers of post offices in operation together with revenue and expenditure for the past few years.

1.—Post Offices in Operation by Province as at Mar. 31, 1954-57

Province or Territory	1954	1955	1956	1957
	No.	No.	No.	No.
Newfoundland.....	613	626	636	640
Prince Edward Island.....	106	105	105	105
Nova Scotia.....	1,179	1,148	1,124	1,117
New Brunswick.....	817	789	736	703
Quebec.....	2,507	2,487	2,463	2,435
Ontario.....	2,630	2,654	2,644	2,627
Manitoba.....	824	822	815	817
Saskatchewan.....	1,364	1,347	1,332	1,318
Alberta.....	1,152	1,156	1,141	1,124
British Columbia.....	963	955	947	940
Yukon Territory.....	15	16	16	16
Northwest Territories.....	32	33	37	37
Canada.....	12,202	12,138	11,996	11,879

2.—Revenue and Expenditure of the Post Office Department, Years Ended Mar. 31, 1948-57

NOTE.—Figures from 1868 will be found in the corresponding table of previous Year Books beginning with the 1911 edition. Figures for Newfoundland are included from 1950.

Year	Gross Revenue	Net Revenue ¹	Expenditure ²	Surplus (+) or Deficit (—)
	\$	\$	\$	\$
1948.....	91,613,618	77,770,967	67,943,476	+9,827,491
1949.....	95,957,469	80,618,401	77,642,621	+2,975,780
1950.....	101,277,435	84,528,655	82,639,741	+1,888,914
1951.....	105,545,456	90,454,678	91,781,466	—1,326,788
1952.....	122,266,675	104,622,208	97,973,263	+6,648,945
1953.....	129,388,365	112,024,245	105,553,191	+6,471,054
1954.....	129,889,325	111,107,484	113,581,752	—2,474,268
1955.....	151,717,273	131,315,049	123,611,055	+7,703,994
1956.....	158,568,356	137,696,621	127,421,739	+10,274,882
1957.....	167,879,869	145,823,785	139,992,921	+6,830,863

¹ Gross revenue less commissions and allowances to postmasters, and other smaller items.
rental of service staff and staff post offices.

² Excludes

The gross revenue receipts shown in Table 2 are received mainly from postage, either in the form of postage stamps and stamped stationery, or postage meter and postage register machine impressions. Some postage is also paid in cash without stamps, stamped stationery or meter and register impressions. The gross value of the postage stamps and stamped stationery sold during each of the latest five fiscal years was: \$67,182,548 in 1952-53, \$64,546,067 in 1953-54, \$74,583,720 in 1954-55, \$75,559,106 in 1955-56 and \$77,735,659 in 1956-57. Receipts from postage meter or postage register impressions and postage paid in cash by other means were as follows: \$52,733,682 in 1952-53, \$55,398,788 in 1953-54, \$65,516,441 in 1954-55, \$70,696,501 in 1955-56 and \$78,041,479 in 1956-57.

3.—Gross Postal Revenue of Offices collecting upwards of \$10,000, Years Ended Mar. 31, 1956 and 1957

NOTE.—Money order commissions are not included in gross postal revenue. Provincial totals of postal revenue include post offices not separately listed.

Province and Post Office	1956	1957	Province and Post Office	1956	1957
	\$	\$		\$	\$
Newfoundland	1,506,873	1,578,986	Nova Scotia	4,685,219	4,883,169
Botwood.....	12,877	12,664	Amherst.....	92,088	96,172
Buchans.....	10,371	10,179	Annapolis Royal.....	15,612	16,612
Carbonear.....	¹	10,746	Antigonish.....	55,925	63,841
Channel.....	11,171	10,946	Baddeck.....	10,722	11,479
Corner Brook.....	102,531	106,675	Bedford.....	15,028	15,395
Deer Lake.....	10,858	11,293	Berwick.....	13,911	14,281
Gander.....	43,592	44,442	Bridgetown.....	18,149	18,825
Goose Airport.....	28,112	31,848	Bridgewater.....	55,187	59,756
Goose Airport Sub-Office A.....	11,719	13,441	Chester.....	12,121	12,270
Grand Falls.....	31,328	36,699	Cornwallis.....	16,724	15,287
Harmon Field.....	28,610	28,165	Digby.....	31,533	34,896
Lewisporte.....	12,236	13,197	Glace Bay.....	70,664	69,033
St. John's.....	708,511	737,569	Halifax.....	2,300,829	2,438,021
Stephenville.....	12,131	15,082	Hantsport.....	11,444	11,445
Wabana.....	16,321	15,834	Inverness.....	10,218	11,725
Windsor.....	11,292	12,634	Kentville.....	86,114	88,384
			Kingston.....	11,263	11,263
Prince Edward Island	457,139	465,088	Liverpool.....	35,408	41,717
Charlottetown.....	237,159	244,398	Lunenburg.....	28,132	29,309
Montague.....	12,842	12,826	Mahone Bay.....	11,898	12,437
Souris East.....	¹	10,164	Middleton.....	26,835	28,413
Summerside.....	66,896	67,701	New Glasgow.....	107,987	111,518
			New Waterford.....	27,234	26,896

¹ Less than \$10,000.

3.—Gross Postal Revenue of Offices collecting upwards of \$10,000, Years Ended Mar. 31, 1956 and 1957—continued

Province and Post Office	1956	1957	Province and Post Office	1956	1957
	\$	\$		\$	\$
Nova Scotia—concluded			Quebec—continued		
North Sydney.....	42,780	44,354	Cap Chat.....	10,232	10,279
Oxford.....	10,356	10,384	Cap de la Madeleine.....	118,249	118,198
Parrsboro.....	14,270	13,353	Causapscal.....	1	17,110
Pictou.....	28,785	31,191	Chambly.....	14,848	15,119
RCAF Station Greenwood.....	12,112	11,809	Chandler.....	24,777	26,715
Shearwater.....	1	10,442	Charny.....	10,949	11,046
Shelburne.....	20,713	22,503	Chibougamau.....	11,971	22,203
Shubenacadie.....	10,805	12,629	Chicoutimi.....	207,111	214,597
Springhill.....	27,767	27,998	Coaticook.....	30,595	30,409
Stellarton.....	27,828	27,969	Cowansville.....	43,049	38,879
Sydney.....	276,064	277,704	Danville.....	14,548	15,082
Sydney Mines.....	22,545	23,057	Dolbeau.....	30,273	32,879
Tatamagouche.....	10,111	10,710	Donnacona.....	15,828	17,559
Trenton.....	10,359	11,202	Dorion-Vaudreuil.....	19,605	20,890
Truro.....	170,659	176,513	Dorval Station.....	13,047	13,489
Westville.....	12,474	13,168	Drummondville.....	171,740	175,553
Windsor.....	41,324	43,126	East Angus.....	15,134	14,592
Wolfville.....	32,625	32,311	Farnham.....	33,658	33,685
Yarmouth.....	89,173	96,258	Forestville.....	13,326	14,933
			Gardenvale.....	203,506	258,546
			Gaspé.....	30,463	34,452
New Brunswick	3,820,680	3,907,335	Gatineau.....	29,744	26,464
Bathurst.....	64,401	68,903	Granby.....	185,541	196,167
Blacks Harbour.....	1	10,478	Grand Mère.....	61,998	74,703
Campbellton.....	72,237	73,872	Hudson.....	10,241	11,204
Chatham.....	35,396	36,203	Hull.....	177,448	192,232
Chipman.....	11,073	10,776	Huntingdon.....	23,223	24,001
Dalhousie.....	28,592	30,075	Joliette.....	104,825	108,571
Dorchester.....	10,724	1	Jonquière-Kenogami.....	89,105	94,970
Edmundston.....	62,475	63,647	Knowlton.....	11,622	14,179
Fredericton.....	369,107	384,920	Labrieville.....	25,002	21,434
Grand Falls.....	24,469	26,072	Lachute.....	35,111	37,599
Hartland.....	12,574	12,018	Lachute Mills.....	12,939	13,707
Harvey Station.....	10,392	10,083	Lac Mégantic.....	31,961	30,201
Minto.....	10,047	12,156	Lacolle.....	1	15,692
Moncton.....	1,338,740	1,376,937	La Malbaie.....	22,624	19,023
Newcastle.....	45,232	54,011	La Prairie.....	15,445	19,210
Perth.....	10,848	10,942	La Sarre.....	32,376	33,533
Plaster Rock.....	11,358	11,471	L'Assomption.....	15,528	16,398
Saint John.....	828,460	846,035	La Tuque.....	49,925	53,520
St. Andrews.....	21,191	20,362	Legnoville.....	31,532	35,810
St. George.....	13,643	11,692	L'Epiphanie.....	10,030	1
St. Stephen.....	40,952	42,153	Lévis.....	171,831	186,486
Sackville.....	55,606	54,678	L'Isletville.....	10,993	10,981
Shediac.....	14,606	14,791	Loretteville.....	19,979	21,908
Sussex.....	37,491	38,011	Louiseville.....	22,362	22,454
Tracadie.....	1	11,192	MacDonald College.....	10,334	10,162
Woodstock.....	51,429	53,821	Magog.....	56,011	60,997
			Malartic.....	25,518	25,672
			Maniwaki.....	28,967	30,583
Quebec	34,374,436	36,593,237	Marieville.....	17,084	16,929
Acton Vale.....	14,389	16,382	Matane.....	50,666	56,594
Amos.....	50,268	49,804	Metabetchouan.....	11,642	11,978
Amqui.....	23,971	24,937	Mont Joli.....	65,750	80,915
Arthabaska.....	11,781	11,522	Mont Laurier.....	34,462	38,132
Arvida.....	56,585	61,282	Montmagny.....	53,275	55,022
Asbestos.....	40,198	40,565	Montreal.....	21,539,878	22,840,751
Aylmer East.....	12,077	12,666	Neuville.....	26,137	24,419
Bagotville.....	16,228	15,714	New Carlisle.....	19,038	19,300
Baie Comeau.....	32,080	40,434	Nicolet.....	43,769	43,285
Baie St. Paul.....	13,247	13,182	Noranda.....	62,960	66,005
Basilique Ste. Anne.....	54,648	49,423	Normandin.....	10,184	10,131
Beauceville East.....	18,487	20,949	Paspébiac.....	1	10,087
Beauharnois.....	35,183	40,467	Plessisville.....	22,744	25,719
Bedford.....	22,656	23,724	Plessisville Station.....	13,357	14,128
Beebe.....	10,345	1	Port Alfred.....	18,621	18,175
Berthierville.....	19,172	19,451	Princeville.....	14,959	15,941
Bourlamaque.....	13,842	14,913	Quebec.....	3,359,652	3,510,225
Bromptonville.....	10,156	1	Rawdon.....	15,450	12,947
Brownburg.....	11,959	12,741	RCAF Station (St. Hubert).....	24,832	27,963
Buckingham.....	27,307	28,387	RCAF Station (St. Jean).....	10,197	16,598
Cabano.....	12,644	12,528	Richmond.....	25,332	24,668

¹ Less than \$10,000.

3.—Gross Postal Revenue of Offices collecting upwards of \$10,000, Years Ended Mar. 31, 1956 and 1957—continued

Province and Post Office	1956	1957	Province and Post Office	1956	1957
	\$	\$		\$	\$
Quebec—concluded			Ontario—continued		
Rigaud	11,353	10,736	Aylmer West	39,619	42,372
Rimouski	155,067	175,716	Bancroft	23,976	30,787
Rivière-du-Loup	71,871	70,735	Barrie	179,265	188,921
Roberval	38,015	38,947	Barrys Bay	10,412	1
Rock Island	29,928	33,220	Bartonville	11,887	13,767
Rouyn	79,097	89,304	Batawa	20,332	20,306
Ste. Agathe-des-Monts	41,608	41,424	Beamsville	23,736	25,701
Ste. Anne-de-Beaupré	21,052	18,287	Beaverton	12,941	12,168
Ste. Anne-de-Bellevue	24,737	25,192	Belle River	1	10,288
Ste. Anne-de-la-Pocatière	21,294	22,031	Belleville	296,682	306,655
Ste. Anne-des-Monts	11,033	11,732	Billings Bridge (Ottawa)	22,058	30,361
St. Eustache	18,108	20,210	Blenheim	31,862	31,785
St. Eustache-sur-le-Lac	11,245	11,940	Blind River	29,569	32,783
St. Félix	21,735	24,635	Bolton	11,684	12,556
St. Gabriel-de-Brandon	13,268	13,068	Bowmanville	50,085	50,627
Ste. Geneviève-de-			Bracebridge	39,362	40,787
Pierrefonds	11,262	13,172	Bradford	21,947	21,195
St. Georges-Ouest	11,266	12,111	Brampton	149,151	193,446
St. Hyacinthe	171,096	179,645	Brantford	516,053	550,176
St. Jean	177,822	181,052	Brighton	19,656	19,388
St. Jean-Port-Joli	12,783	12,580	Brockville	173,247	187,951
St. Jérôme	98,582	103,963	Bronte	10,993	11,504
St. Joseph-de-Beauce	15,783	15,906	Burks Falls	11,505	11,247
St. Jovite	12,750	13,626	Burlington	122,178	160,363
Ste. Marie-Beauce	21,834	23,174	Byron	15,537	17,852
St. Pascal	13,900	14,055	Caledonia	15,491	16,117
St. Raymond	14,803	15,099	Campbellford	28,329	27,847
St. Rémi	1	11,272	Camp Borden	30,178	30,506
Ste. Rose	18,681	20,243	Capreol	11,377	11,951
Ste. Thérèse-de-Blainville	42,708	47,415	Cardinal	16,429	17,753
St. Tite	13,047	13,806	Carleton Place	33,531	34,196
Sayabec	10,002	10,032	Chalk River	19,263	18,502
Senneterre	15,980	16,671	Chapleau	27,430	27,572
Seven Islands	56,031	71,924	Chatham	360,701	312,063
Shawinigan Falls	142,706	149,168	Chelmsford	11,314	13,231
Shawville	14,418	15,780	Chesley	14,835	14,466
Sherbrooke	524,357	548,540	Chesterville	11,372	11,308
Sorel	84,982	91,313	Chippawa	12,426	12,900
Station St. Victor	1	17,102	City View	11,672	16,610
Sutton	11,884	11,549	Clarkson	16,081	25,047
Terrebonne	15,095	16,817	Clinton	29,101	30,392
Therford Mines	103,751	110,285	Cobalt	17,857	17,050
Three Rivers	376,635	402,173	Cobourg	95,411	97,029
Timiskaming Station	16,469	16,614	Cochrane	35,861	38,118
Trois Pistoles	20,273	21,032	Colborne	11,860	11,430
Val d'Or	73,418	90,673	Collingwood	49,781	54,506
Valleyfield	91,380	106,371	Cooksville	48,632	48,794
Victoriaville	95,454	104,798	Copper Cliff	32,661	29,608
Ville-d'Alma	45,834	49,214	Cornwall	228,231	250,318
Ville-Jacques Cartier	2	257,877	Corunna	10,663	13,189
Ville-Marie	12,458	12,825	Deep River	20,922	21,242
Ville St. Georges	33,926	35,114	Delhi	33,753	34,624
Warwick	12,943	13,299	Don Mills	66,728	142,013
Waterloo	30,204	30,391	Downsview	125,875	185,802
Windsor	15,926	16,935	Dresden	18,614	18,200
			Dryden	43,266	45,671
			Dundas	67,633	77,202
			Dunnville	52,843	54,062
			Durham	17,595	15,870
			Eganville	14,974	14,902
			Elliot Lake	4	20,609
			Elmira	25,529	26,868
			Elora	10,667	1
			Englehart	13,174	13,819
			Espanola	23,756	23,598
			Essex	31,299	31,744
			Exeter	23,801	23,985
			Fenelon Falls	14,863	14,796
			Fergus	43,335	42,662
			Ferris	12,467	12,802
			Fonthill	12,193	13,417
			Forest	19,196	19,351
Ontario	61,190,037	65,807,534			
Acton	26,641	28,763			
Agincourt	29,311	33,488			
Ajax	46,715	51,623			
Aldershot	14,893	3			
Alexandria	17,885	18,290			
Alliston	20,214	22,406			
Almonte	17,955	18,173			
Amherstburg	34,168	36,263			
Ancaster	19,899	23,103			
Ansonville	12,365	12,553			
Arnprior	52,024	65,664			
Arthur	1	10,032			
Atikokan	30,654	34,754			
Aurora	43,487	44,367			

¹ Less than \$10,000.² Included in Montreal.³ Included in Burlington.

Opened Feb. 14, 1956.

3.—Gross Postal Revenue of Offices collecting upwards of \$10,000, Years Ended Mar. 31, 1956 and 1957—continued

Province and Post Office	1956	1957	Province and Post Office	1956	1957
	\$	\$		\$	\$
Ontario—continued			Ontario—continued		
Fort Erie.....	109,761	113,040	Norwich.....	15,378	15,639
Fort Frances.....	64,127	67,208	Oakville.....	210,574	241,778
Fort William.....	353,679	374,345	Orangeville.....	36,441	39,430
Galt.....	235,450	247,974	Orillia.....	145,314	152,597
Gananoque.....	47,623	48,240	Oshawa.....	629,555	706,381
Georgetown.....	80,824	85,077	Ottawa.....	3,229,071	3,351,014
Geraldton.....	24,146	23,944	Owen Sound.....	200,309	199,021
Glencoe.....	11,448	11,342	Palmerston.....	12,909	11,240
Goderich.....	52,027	50,806	Paris.....	55,519	62,995
Gore Bay.....	12,277	12,203	Park Hill.....	10,845	10,804
Gravenhurst.....	33,835	34,107	Parry Sound.....	52,382	55,938
Grimsby.....	40,637	42,884	Pembroke.....	130,868	133,121
Guelph.....	382,989	388,665	Penetanguishene.....	22,151	22,865
Hagersville.....	21,266	21,708	Perth.....	66,718	66,044
Haileybury.....	24,112	24,607	Petawawa Camp.....	20,240	19,205
Haliburton.....	16,262	16,708	Peterborough.....	430,932	474,648
Hamilton.....	2,561,585	2,826,647	Petrolia.....	22,992	26,102
Hanover.....	34,841	36,699	Pickering.....	15,300	15,961
Harriston.....	15,009	13,448	Pictou.....	62,884	63,272
Harrow.....	20,939	20,946	Point Edward.....	14,610	15,246
Hawkesbury.....	34,693	36,238	Port Arthur.....	306,977	328,554
Hearst.....	23,418	24,909	Port Burwell.....	12,502	14,565
Hespeler.....	29,603	30,168	Port Colborne.....	90,530	96,197
Highland Creek.....	16,389	17,678	Port Credit.....	147,009	172,400
Hornepayne.....	1	10,089	Port Dalhousie.....	19,308	19,913
Huntsville.....	55,131	56,539	Port Dover.....	21,036	22,201
Ingersoll.....	56,119	60,038	Port Elgin.....	15,726	16,062
Iroquois.....	12,444	13,284	Port Hope.....	75,791	78,141
Iroquois Falls.....	13,978	13,775	Port Perry.....	15,681	15,779
Jamestown.....	15,407	16,770	Powassan.....	10,767	10,793
Kapuskasing.....	46,955	51,079	Prescott.....	45,677	49,755
Kemptville.....	19,578	20,406	Preston.....	88,620	101,197
Kenora.....	98,783	106,325	Rainy River.....	10,563	10,264
Kincardine.....	24,573	25,258	RCAF Station, Borden.....	13,520	14,109
Kingston.....	502,284	519,243	RCAF Station, Centralia.....	12,661	12,717
Kingsville.....	31,280	33,150	RCAF Station, Clinton.....	13,023	14,118
Kirkland Lake.....	107,501	113,047	RCAF Station, Rockcliffe.....		
Kitchener.....	656,714	693,939	Ottawa.....	46,103	40,625
Lakefield.....	16,838	16,698	RCAF Station, Trenton.....	39,372	39,254
Lambeth.....	10,142	11,155	Red Lake.....	14,203	14,213
Leamington.....	99,401	108,781	Renfrew.....	69,557	68,391
Levack.....	12,164	12,710	Rexdale.....	20,089	46,671
Lindsay.....	106,670	110,227	Richmond Hill.....	35,868	46,321
Listowel.....	30,026	30,170	Ridgetown.....	22,278	23,474
Little Current.....	16,456	16,632	Ridgeway.....	15,480	16,412
London.....	1,947,976	2,108,976	Rodney.....	10,542	10,721
Lorne Park.....	11,110	11,314	St. Catharines.....	578,926	616,528
Lucknow.....	10,886	10,643	St. Mary's.....	37,621	37,238
Madoc.....	14,035	14,170	St. Thomas.....	208,764	219,280
Malton.....	34,407	37,515	Sarnia.....	346,436	368,512
Maple.....	15,056	19,010	Sault Ste. Marie.....	273,417	303,977
Marathon.....	17,418	17,177	Scarborough.....	134,648	235,443
Markdale.....	10,957	11,602	Scarborough Village.....	1	11,147
Markham.....	18,308	20,758	Schreiber.....	11,887	12,201
Marmora.....	10,957	10,899	Schumacher.....	16,785	16,726
Matheson.....	11,912	12,468	Seaforth.....	22,495	22,148
Mattawa.....	14,093	14,205	Shelburne.....	13,381	13,600
Meaford.....	28,733	29,302	Simcoe.....	107,210	113,648
Midland.....	63,963	65,712	Sioux Lookout.....	25,318	26,208
Milton West.....	41,986	46,265	Smith's Falls.....	74,210	76,514
Minden.....	12,635	13,541	Smooth Rock Falls.....	12,550	12,690
Mitchell.....	14,828	13,907	Southampton.....	13,333	13,466
Morrisburg.....	21,027	21,614	South Porcupine.....	24,189	24,142
Mount Forest.....	20,766	22,804	Spragge.....	1	14,204
Napanee.....	45,609	45,813	Stayner.....	14,802	14,830
New Hamburg.....	16,484	19,401	Stirling.....	10,760	11,272
New Liskeard.....	82,318	83,554	Stoney Creek.....	32,625	38,237
Newmarket.....	65,827	70,766	Stouffville.....	21,205	22,247
Niagara Falls.....	488,298	504,996	Stratford.....	220,785	241,278
Niagara-on-the-Lake.....	36,369	21,553	Strathroy.....	42,892	43,960
Nipigon.....	14,238	15,222	Streetsville.....	25,237	29,607
North Bay.....	255,767	281,644	Sturgeon Falls.....	25,662	26,565

¹ Less than \$10,000.

3.—Gross Postal Revenue of Offices collecting upwards of \$10,000, Years Ended Mar. 31, 1956 and 1957—continued

Province and Post Office	1956	1957	Province and Post Office	1956	1957
	\$	\$		\$	\$
Ontario—concluded			Manitoba—concluded		
Sudbury.....	473,657	528,715	Virten.....	36,209	35,146
Sundridge.....	1	10,134	Wawanesa.....	10,283	13,246
Sutton West.....	12,365	12,565	Winkler.....	12,974	13,354
Tecumseh.....	15,523	17,169	Winnipeg.....	7,490,246	7,826,915
Terrace Bay.....	11,476	11,187			
Thamesville.....	12,615	12,781			
Thessalon.....	14,058	13,715	Saskatchewan	6,791,233	7,106,478
Thornhill.....	16,976	18,748	Assiniboia.....	25,325	26,704
Thorold.....	83,490	89,459	Biggar.....	18,436	19,759
Tilbury.....	23,040	22,470	Broadview.....	11,171	10,728
Tillsonburg.....	65,213	71,566	Canora.....	18,516	18,335
Timmins.....	162,275	169,838	Carlyle.....	10,425	10,896
Toronto.....	31,754,078	34,320,436	Carnduff.....	1	10,559
Trenton.....	91,002	99,351	Davidson.....	10,667	10,802
Tweed.....	20,403	17,981	Estevan.....	47,780	66,190
Uxbridge.....	18,520	19,146	Eston.....	13,127	13,935
Vankleek Hill.....	10,374	1	Fort San.....	11,365	11,491
Virginiatown.....	1	10,975	Gravelbourg.....	12,977	12,830
Walkerton.....	35,913	36,976	Gravelbourg.....	13,920	15,142
Wallaceburg.....	69,026	75,219	Grenfell.....	10,805	11,136
Waterdown.....	15,945	17,085	Gull Lake.....	10,952	10,383
Waterford.....	14,360	15,032	Hudson Bay.....	11,743	11,985
Waterloo.....	237,666	258,941	Humboldt.....	31,220	32,306
Watford.....	14,084	13,715	Indian Head.....	14,849	18,122
Welland.....	232,938	260,586	Kamsack.....	18,873	20,095
Westboro (Ottawa).....	112,052	119,247	Kerrobart.....	13,526	13,196
West Hill.....	21,805	21,606	Kindersley.....	26,117	28,008
West Lorne.....	10,073	1	Lloydminster.....	57,507	56,718
Woodroffe (Ottawa).....	10,483	2	Maple Creek.....	21,563	21,094
Wheatley.....	11,132	11,242	Meadow Lake.....	19,310	21,292
Whitby.....	48,614	54,064	Melfort.....	38,326	39,623
Wiaraton.....	17,867	17,358	Melville.....	35,636	35,622
Willowdale.....	243,946	282,594	Moose Jaw.....	276,516	283,347
Winchester.....	15,224	15,539	Nipawin.....	17,846	18,118
Windsor.....	1,496,820	1,585,341	North Battleford.....	23,659	25,098
Wingham.....	28,672	30,900	Outlook.....	106,704	106,536
Woodbridge.....	18,630	18,381	Oxbow.....	10,933	10,883
Woodstock.....	204,873	223,229	Prince Albert.....	10,396	11,667
			Regina.....	181,596	204,292
Manitoba.....	9,301,541	9,689,165	Rosetown.....	2,537,096	2,721,492
Altona.....	15,858	16,855	Rosetown.....	26,859	27,562
Beauséjour.....	13,870	14,619	Rosetown.....	13,028	13,107
Boissevain.....	12,938	13,376	Saskatoon.....	983,079	1,044,884
Brandon.....	267,606	273,427	Shamavon.....	21,652	21,656
Carman.....	17,255	17,468	Shellbrook.....	1	10,564
Churchill.....	10,800	11,305	Swift Current.....	111,231	116,103
Dauphin.....	84,072	82,570	Tisdale.....	28,510	27,282
Deloraine.....	10,547	10,391	Unity.....	18,774	19,838
Flin Flon.....	62,324	67,591	Uranium City.....	24,234	27,792
Fort Churchill.....	22,461	29,380	Wadena.....	13,990	14,261
Gimli.....	11,249	12,275	Watrous.....	13,197	13,140
Grand View.....	1	10,100	Weyburn.....	60,786	65,165
Killarney.....	14,115	14,146	Wilkie.....	16,266	16,386
Lynn Lake.....	1	10,404	Wynyard.....	13,237	14,406
Minnedosa.....	19,680	20,542	Yorkton.....	108,129	105,854
Morden.....	16,750	16,559			
Neepawa.....	30,204	29,494	Alberta.....	9,185,729	9,866,742
Pine Falls.....	13,466	14,437	Athabasca.....	15,325	15,814
Portage la Prairie.....	93,201	92,897	Banff.....	69,945	73,132
Rivers.....	10,063	10,872	Banff Springs Hotel.....	12,453	11,507
Rivers Camp.....	10,045	10,238	Barrhead.....	17,580	17,725
Roblin.....	14,262	15,159	Beaverlodge.....	10,132	11,157
Russell.....	12,736	12,865	Blairmore.....	14,368	13,685
Selkirk.....	32,043	35,625	Bonnyville.....	15,867	16,082
Shilo.....	15,481	16,110	Bowden.....	16,544	16,089
Souris.....	14,712	15,485	Bowness.....	17,261	18,574
Steinbach.....	26,682	24,616	Brooks.....	27,733	28,740
Swan River.....	26,041	27,247	Calgary.....	2,660,163	2,956,674
The Pas.....	32,384	39,761	Camrose.....	59,812	61,693
Transcona.....	20,876	23,367			

¹ Less than \$10,000.² Included in Ottawa.

3.—Gross Postal Revenue of Offices collecting upwards of \$10,000, Years Ended Mar. 31, 1956 and 1957—continued

Province and Post Office	1956	1957	Province and Post Office	1956	1957
	\$	\$		\$	\$
Alberta—concluded			British Columbia—concluded		
Cardston.....	20,241	20,580	Courtenay.....	66,672	70,401
Château Lake Louise.....	11,182	11,309	Cranbrook.....	56,914	59,931
Clareholm.....	25,418	22,600	Creston.....	29,904	31,133
Coaldale.....	13,852	11,992	Dawson Creek.....	69,779	90,492
Coleman.....	12,808	11,699	Duncan.....	79,368	84,936
Currie Barracks.....	10,993	12,562	Enderby.....	12,237	12,155
Devon.....	1	10,443	Essondale.....	1	11,777
Didsbury.....	15,193	15,530	Fernie.....	25,019	24,788
Drayton Valley.....	16,773	27,368	Fort St. John.....	20,386	31,008
Drumheller.....	48,122	47,149	Ganges.....	12,296	13,117
Edmonton.....	3,289,919	3,558,967	Gibsons.....	14,683	15,872
Edson.....	28,742	30,108	Golden.....	13,224	14,054
Fairview.....	14,841	14,828	Grand Forks.....	21,310	22,467
Falher.....	1	10,348	Haney.....	44,729	45,955
Fort Macleod.....	18,358	19,246	Hope.....	20,771	23,774
Fort Saskatchewan.....	16,888	18,846	Kamloops.....	173,096	181,231
Grand Centre (MPO 503).....	12,566	17,360	Kelowna.....	157,822	164,146
Grande Prairie.....	71,636	78,295	Kemano.....	10,489	1
Hanna.....	22,544	23,763	Kimberley.....	37,769	37,665
High Prairie.....	18,012	17,241	Kitimat.....	78,078	114,295
High River.....	22,008	22,697	Ladner.....	33,557	35,249
Hinton.....	1	21,080	Ladysmith.....	20,252	21,108
Innisfail.....	22,697	22,871	Lake Cowichan.....	12,527	13,240
Jasper.....	26,298	27,971	Langley.....	47,168	48,457
Lac-la-Biche.....	1	10,246	Lillooet.....	12,311	11,816
Lacombe.....	33,975	33,449	Merritt.....	15,528	16,935
Lancaster Park.....	20,710	16,826	Mission City.....	56,061	57,006
Leduc.....	17,179	17,254	Nakusp.....	10,362	11,110
Lethbridge.....	345,435	355,852	Nanaimo.....	166,591	189,167
Lincoln Park.....	1	12,883	Nelson.....	127,055	127,695
Medicine Hat.....	144,966	155,638	Newton Station.....	10,148	11,964
Nanton.....	11,463	11,801	New Westminster.....	529,057	553,503
North Edmonton.....	20,720	20,569	Ocean Falls.....	26,616	27,043
Olds.....	27,751	29,634	Oliver.....	28,125	28,503
Peace River.....	38,519	38,624	Osoyoos.....	14,313	14,067
Pincher Creek.....	19,595	21,280	Parksville.....	15,171	15,642
Ponoka.....	33,825	34,557	Penticton.....	125,603	136,754
Provost.....	11,277	11,452	Port Alberni.....	83,158	95,792
Raymond.....	14,730	15,087	Port Alice.....	10,729	12,968
Red Deer.....	143,275	158,249	Port Coquitlam.....	21,000	22,442
Rimby.....	10,512	10,953	Port Moody.....	13,216	14,164
Rocky Mountain House.....	18,465	18,163	Powell River.....	35,944	38,859
St. Paul.....	21,062	21,112	Prince George.....	140,009	162,094
Spirit River.....	10,582	10,793	Prince Rupert.....	110,336	109,225
Stettler.....	37,503	39,269	Princeton.....	20,027	20,011
Stony Plain.....	11,798	11,873	Qualicum Beach.....	15,070	15,021
Taber.....	29,021	29,754	Quesnel.....	50,351	57,082
Three Hills.....	36,418	38,789	Revelstoke.....	31,135	31,293
Vegreville.....	25,276	25,913	Rossland.....	22,012	21,500
Vermilion.....	26,972	26,364	Royal Oak.....	13,367	15,443
Viking.....	11,313	11,241	Salmon Arm.....	33,761	35,115
Vulcan.....	16,409	16,567	Sardis.....	15,302	16,158
Wainwright.....	26,209	27,378	Sechelt.....	1	11,072
Westlock.....	22,022	23,662	Sidney.....	28,137	28,112
Wetaskiwin.....	45,190	46,848	Smithers.....	25,116	26,667
			100 Mile House.....	1	10,218
			Squamish.....	13,792	15,282
British Columbia	14,078,121	15,096,618	Steveston.....	18,373	16,696
Abbotsford.....	53,039	55,508	Terrace.....	29,943	35,812
Agassiz.....	10,983	12,551	Trail.....	135,566	137,619
Alberni.....	25,191	30,508	Vancouver.....	7,755,636	8,406,236
Aldergrove.....	14,735	15,040	Vancouver, Air Mail Field.....	30,334	33,819
Alert Bay.....	11,917	11,794	Vanderhoof.....	14,960	15,766
Armstrong.....	17,477	17,442	Vedder Crossing.....	11,087	11,300
Ashcroft.....	12,597	13,918	Vernon Crossing.....	127,143	131,843
Burns Lake.....	16,497	17,144	Victoria.....	1,545,554	1,604,541
Campbell River.....	44,963	57,663	Victoria Fleet Mail Office.....	30,962	29,068
Castlegar.....	14,453	15,218	West Summerland.....	18,768	18,832
Chemainus.....	18,128	20,140	Westview.....	24,676	29,087
Chilliwack.....	110,499	116,025	White Rock.....	34,390	57,541
Cloverdale.....	48,754	49,745	White Rock Hilltop.....	15,698	2
			Williams Lake.....	39,813	43,553

¹ Less than \$10,000.

² Included in White Rock.

3.—Gross Postal Revenue of Offices collecting upwards of \$10,000, Years Ended Mar. 31, 1956 and 1957—concluded

Province and Post Office	1956	1957	Province and Post Office	1956	1957
	\$	\$		\$	\$
Yukon Territory	114,859	120,649	Summary—concluded		
Dawson.....	11,937	12,387	New Brunswick.....	3,820,680	3,907,335
RCAF Station, Whitehorse..	18,230	17,166	Quebec.....	34,374,436	36,593,237
Whitehorse.....	67,418	71,496	Ontario.....	61,190,037	65,807,534
Northwest Territories	55,828	62,720	Manitoba.....	9,301,541	9,689,165
Yellowknife.....	28,766	31,596	Saskatchewan.....	6,791,238	7,106,478
Summary			Alberta.....	9,185,729	9,866,742
Newfoundland.....	1,506,873	1,578,986	British Columbia.....	14,078,121	15,096,618
Prince Edward Island.....	457,139	465,088	Yukon and N.W.T.....	170,687	183,369
Nova Scotia.....	4,685,219	4,883,169	Canada	145,561,700	155,177,721
			P.C. of all Postal Revenue...	91.8	92.4

Auxiliary Postal Services.—Auxiliary postal services include the issuing of money orders and the operation of the Post Office Savings Bank.

Table 4 shows the amount of money order business conducted by the postal service in recent years. A table showing the financial business of the Post Office Savings Bank will be found in Chapter XXVI on Currency and Banking.

4.—Operations of the Money Order System, Years Ended Mar. 31, 1948-57

NOTE.—Figures from 1868 will be found in the corresponding table of previous Year Books beginning with the 1911 edition.

Year	Money Order Offices in Canada	Money Orders Issued in Canada	Value of Orders Issued in Canada	Value Payable in—		Value of Orders Issued in Other Countries, Payable in Canada
				Canada	Other Countries	
	No.	No.	\$	\$	\$	\$
1948.....	7,546	27,705,523	370,232,987	359,633,658	10,599,329	7,722,585
1949.....	7,614	28,851,065	415,703,754	409,167,635	6,536,119	7,410,014
1950.....	11,252	38,567,500	479,520,987	473,364,799	6,156,187	6,697,818
1951.....	11,387	40,415,207	511,915,621	505,935,524	5,980,096	3,920,218
1952.....	11,320	41,782,109	580,823,622	571,396,122	9,427,500	3,019,522
1953.....	11,288	43,067,940	623,266,884	606,289,305	16,977,579	4,982,551
1954.....	11,264	45,797,958	676,080,657	656,515,831	19,564,826	4,763,566
1955.....	11,200	46,902,959	690,824,787	668,930,066	21,894,721	5,008,716
1956.....	11,099	49,081,082	725,930,733	704,230,646	21,700,086	4,643,217
1957.....	11,022	51,182,296	799,615,004	772,708,244	26,906,761	5,033,806

PART V.—THE PRESS

About 105 daily newspapers, counting morning and evening editions separately, are published in Canada. They have an aggregate reported circulation of nearly 4,000,000—about 82 p.c. in English, 17 p.c. in French and the remainder in other languages. Ten of the daily newspapers enjoying circulations in excess of 100,000 account for more than half of the circulation. French dailies, as would be expected, have their widest circulation in Quebec where 10 of the 12 in existence in 1956 were published. Some of the largest of these papers have been established in that Province for over 60 years. Foreign-language publications, shown in Table 5, are gaining rapidly in number and circulation as a result of recent heavy immigration.

Weekly newspapers serve more people in rural communities than do the dailies. They cater to local interests and exercise an important influence in the areas they serve.

The Canadian Press, a co-operative organization owned and operated by Canada's daily newspapers, provides its 95 members with world and Canadian news and news photographs, mostly by means of teletype and wirephoto transmission. It also serves weekly newspapers and radio and television stations. It is, in effect, a partnership through which each member newspaper provides to its fellow members the news of its particular area and through which the general news of the world is brought to Canada. Cost of editing and transmission is divided among members according to the population of the cities in which they publish. CP gets world news from Reuters, the British agency, and from the Associated Press, the United States co-operative, and these agencies have reciprocal arrangements with CP for their coverage of Canada.

The United Press International (the British United Press and the United Press combined in May 1958) also provides a service of Canadian and world news, news photographs and related features for Canadian newspapers, radio and television stations. There are, as well, special news services operated by affiliated newspapers and individual newspapers. Several foreign news agencies have representatives in Canada to supply and interpret news of Canadian origin, as have a number of the leading United Kingdom and United States newspapers. Most of the latter are located at Ottawa.

Press Statistics.—The following tables are based on data estimated from *Canadian Advertising*. One serious difficulty has been encountered in connection with the compilation of circulation figures. Reliable circulation figures are relatively easy to obtain for daily newspapers because, in their own best interest, such papers qualify for and subscribe to the Audit Bureau of Circulation requirements: for these, A.B.C. 'net paid' figures have been used. However, it is difficult to obtain reliable circulation figures for many weekly newspapers and for magazines, and those shown in the following tables should be used with reservations.

1.—Estimated Numbers and Circulations¹ of reporting Daily and Weekly² English-Language Newspapers by Province 1951-56

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Province or Territory	1954				1955				1956			
	Daily		Weekly ³		Daily		Weekly		Daily		Weekly	
	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
Nfld.	3	31,703	4	29,122	3	28,923	4	29,815	3	32,276	4	30,725
P.E.I.	2	18,910	1	5,435	2	19,042	1	5,735	2	19,446	1	5,626
N.S.	5	148,470	27	80,066	5	150,339	26	79,056	5	149,557	26	81,906
N.B.	3	75,701	19	58,863	3	77,960	17	51,962	3	80,657	17	53,612
Que.	5	294,867	31	1,552,119 ⁴	5	307,186	25	1,454,979 ⁴	5	314,080	24	1,556,350 ⁴
Ont.	40	1,635,723	256	1,575,487	40	1,681,106	254	1,597,398	41	1,688,314	252	1,637,072
Man.	6	196,697	66	107,506	6	205,065	66	85,150	6	207,848	67	82,684
Sask.	4	98,480	152	164,614	4	102,365	150	146,900	4	101,602	164	146,205
Alta.	5	196,823	99	128,153	5	204,927	98	146,869	5	215,017	108	174,775
B.C.	11	431,679	80	197,510	12	447,763	81	166,985	12	439,295	82	183,917
Yukon and N.W.T.	—	—	3	4,250	—	—	2	3,875	—	—	2	4,215
Canada	84	3,129,053	738	3,903,125	85	3,224,676	724	3,768,724	86	3,248,093	747	3,957,087

¹ Circulation not reported for all newspapers.

² Includes some bilinguals.

³ Includes one week-end supplement which is circulated with daily newspapers in other provinces.

⁴ Includes semi-weeklies, tri-weeklies and week-end newspapers.

2.—Estimated Numbers and Circulations¹ of reporting Daily and Weekly² French-Language Newspapers by Province 1951-56

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Province	1954				1955				1956			
	Daily		Weekly ³		Daily		Weekly ³		Daily		Weekly ³	
	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
N.S.....	—	—	1	1,433	—	—	1	1,398	—	—	1	1,431
N.B.....	1	7,468	2	7,144	1	7,268	2	7,476	1	7,374	2	7,463
Que.....	11	616,036	123 ¹	1,667,407 ⁴	10	616,999	140	2,045,012 ⁴	10	615,648	142	2,122,174 ⁴
Ont.....	1	26,017	4 ¹	16,951 ¹	1	26,976	5	19,035	1	27,950	5	13,989
Man.....	—	—	1	10,120	—	—	1	9,950	—	—	1	9,141
Sask.....	—	—	1	1,202	—	—	1	1,702	—	—	1	3,281
Alta.....	—	—	1	3,409	—	—	1	4,218	—	—	1	3,710
Totals.....	13	649,521	133	1,707,666⁴	12	651,243	151	2,088,791	12	650,972	153	2,161,189

¹ Circulation not reported for all newspapers.

² Includes semi-weeklies and week-end newspapers.

³ Includes some bilinguals in 1954 and all bilinguals in 1955 and 1956.

⁴ Includes one week-end supplement which is circulated with newspapers in other provinces.

3.—Estimated Numbers and Circulations of reporting Daily and Weekly English-Language Newspapers Published in Urban Centres of 30,000 Population or Over 1955 and 1956

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Urban Centre	Census 1956	1955				1956			
	House-holds	Daily		Weekly		Daily		Weekly	
	No.	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
Brantford, Ont.....	14,642	1	20,561	—	—	1	20,948	—	—
Calgary, Alta.....	52,785	2	89,373	1	10,000	2	95,709	1	13,000
Edmonton, Alta.....	57,748	1	93,525	1	4,269	1	97,023	2	11,965
Fort William, Ont.....	10,118	1	13,877	—	—	1	14,133	—	—
Guelph, Ont.....	9,284	1	11,844	—	—	1	12,286	—	—
Halifax, N.S.....	21,194	1	108,992	—	—	1	107,199	—	—
Hamilton, Ont.....	63,815	2	101,834	—	—	1	92,715	—	—
Kingston, Ont.....	12,499	1	20,363	1	40,337 ¹	1	20,626	1	42,816 ¹
Kitchener, Ont.....	16,074	1	31,677	—	—	1	32,642	—	—
London, Ont.....	28,962	1	94,437	—	—	1	98,724	—	—
Moncton, N.B.....	8,647	1	21,836	—	—	1	22,759	—	—
Montreal, Que.....	285,501	3	293,061	4	1,393,953 ²	3	299,116	3	1,494,469 ³
New Westminster, B.C.....	8,874	1	12,104	—	—	1	12,880	—	—
Oshawa, Ont.....	13,530	1	12,454	—	—	1	13,000	—	—
Ottawa, Ont.....	56,059	2	118,463	1	15,125	2	121,899	1	15,125
Peterborough, Ont.....	11,632	1	18,051	1	5,690	1	18,644	1	5,492
Port Arthur, Ont.....	9,979	1	12,637	—	—	1	12,430	—	—
Quebec, Que.....	38,556	1	5,513	—	—	1	6,267	—	—
Regina, Sask.....	23,883	1	47,387	1	2,400	1	47,334	1	2,400
St. Catharines, Ont.....	10,971	1	23,671	—	—	1	24,537	—	—
St. John's, Nfld.....	11,219	2	25,278	2	24,702 ⁴	2	26,974	2	25,532 ⁴
Saint John, N.B.....	13,336	1	45,016	2	10,550	1	45,838	2	10,600
Sarnia, Ont.....	11,917	1	13,853	1	11,000	1	14,374	1	15,000
Saskatoon, Sask.....	20,315	1	38,510	—	—	1	38,531	—	—
Sault Ste. Marie, Ont.....	9,169	1	13,545	—	—	1	14,023	—	—
Sherrbrooke, Que.....	13,646	1	8,612	1	3,400	1	8,697	1	3,400
Sudbury, Que.....	11,526	1	25,154	—	—	1	26,192	—	—
Sydney, N.S.....	6,914	1	27,035	—	—	1	26,867	—	—
Toronto, Ont.....	157,137	4	908,454	4	1,038,551 ⁴	4	901,605	5	1,009,291 ⁵
Three Rivers, Que.....	10,912	—	—	1	4,162	—	—	1	4,162
Vancouver, B.C.....	108,953	3	354,502	6	23,538	3	343,756	7	33,258
Verdun, Que.....	21,009	—	—	1	8,361	—	—	1	8,118
Victoria, B.C.....	17,309	2	50,210	1	3,000	2	51,051	1	2,500
Windsor, Ont.....	33,280	1	75,164	—	—	1	77,170	—	—
Winnipeg, Man.....	67,798	2	188,695	1	..	2	190,822	1	..

¹ Week-end newspaper.

² Includes two week-end newspapers, one of which, a week-end supplement, is circulated with daily newspapers in other cities.

³ Includes one week-end supplement which is circulated with daily newspapers in other cities.

⁴ Includes one week-end newspaper.

⁵ Includes two week-end newspapers.

4.—Estimated Numbers and Circulations of reporting Daily and Weekly French-Language Newspapers Published in Urban Centres of 30,000 Population or Over 1955 and 1956

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Urban Centre	Census 1956	1955				1956			
	House- holds	Daily		Weekly		Daily		Weekly	
		No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
Edmonton, Alta.	57,748	—	—	1	4,218	—	—	1	3,710
Hull, Que.	11,167	—	—	3	66,275 ¹	—	—	3	48,172 ¹
Lachine, Que.	8,557	—	—	1	14,000 ²	—	—	1	14,000 ²
Moncton, N.B.	8,647	1	7,268	—	—	1	7,374	—	—
Montreal, Que.	285,501	4	352,041	22	1,463,714 ³	4	350,318	26	1,617,646 ⁴
Ottawa, Ont.	56,059	1	26,976	—	—	1	27,950	—	—
Quebec, Que.	38,556	2	199,278	—	—	2	197,428	—	—
St. Laurent, Que.	9,304	—	—	1	8,252	—	—	1	5,000 ²
Sherbrooke, Que.	13,646	1	25,421	1	35,866	1	26,732	1	35,866
Sudbury, Ont.	11,526	—	—	1	1,851	—	—	1	1,989
Three Rivers, Que.	10,912	1	29,983	3	14,312	1	31,359	3	7,812 ⁵
Verdun, Que.	21,009	—	—	1	24,000 ²	—	—	—	—
Winnipeg, Man.	67,798	—	—	1	9,950	—	—	1	9,141

¹ Includes one week-end supplement which is circulated with daily newspapers in other cities.

² Bilingual.

³ Includes ten bilinguals and ten week-end newspapers.

⁴ Includes 11 bilinguals and 11 week-end newspapers.

⁵ Circulation for two weeklies only.

5.—Estimated Numbers and Circulations of Foreign-Language Publications 1955 and 1956

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Language	1955		1956	
	No.	Circulation	No.	Circulation
Bulgarian	2	4,500	2	4,500
Byelorussian	1	1,213	1	2,213
Chinese	5	14,643 ¹	5	14,643 ¹
Czech	1	4,873	1	4,873
Czech and Slovak	2	6,516	2	6,516
Danish	1	1,715	1	1,715
Dutch	8	33,053	8	33,316
Estonian	2	9,855	2	9,787
Finnish	4	14,631	4	14,631
German	8	81,146	9	88,687
Hungarian	2	7,674	2	7,674
Icelandic	3	8,510	2	3,935
Italian	5	53,512	5	52,087
Japanese	2	7,010	2	7,010
Latvian	2	7,425	2	7,425
Lithuanian	3	10,470 ²	3	10,470 ²
Maltese	1	833	1	1,274
Norwegian	1	4,880	1	4,880
Polish	4	45,987	4	46,218
Russian	1	4,018	1	4,018
Serbian	5	32,684	5	32,440
Slovenian	1	3,114	1	3,114
Swedish	2	4,711	2	4,171
Ukrainian	15	124,849	18	148,745
Yiddish	4	54,631	4	55,044

¹ Circulation for four publications only.

² Circulation for two publications only.

Table 6 shows the number of publications, other than newspapers, published in Canada. Monthly and weekly magazines and periodicals enjoy the largest circulation; those dealing with home, social and welfare, agricultural and rural topics, trade, industry and related subjects and religious publications are the most popular.

6.—Estimated Numbers and Circulations of reporting Magazines and Related Publications by Broad Classifications 1954-1956

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Classification	1954			1955			1956		
	Listed	Reporting		Listed	Reporting		Listed	Reporting	
	No.	No.	Circulation	No.	No.	Circulation	No.	No.	Circulation
Agricultural and rural.....	59	57	2,610,199	55	53	2,565,302	55	52	2,665,856
Arts, crafts and professions.....	20	20	104,902	26	23	345,290	28	25	170,763
Construction.....	21	20	148,156	21	20	131,309	21	20	140,221
Educational.....	66	64	524,786	69	67	521,028	71	71	641,126
Finance and insurance.....	13	9	111,986	14	10	275,865	14	11	183,472
Government and government services.....	29	28	302,385	31	30	347,865	34	32	471,561
Home, social and welfare.....	46	42	4,336,715	44	40	4,425,193	43	41	4,308,466
Labour.....	16	13	231,757	15	13	264,846	13	12	261,108
Pharmaceutical and medical.....	33	30	129,717	34	30	143,222	37	32	374,065
Religious.....	33	33	628,264	32	32	891,937	33	33	920,633
Services and directories.....	61	56	455,200	69	59	487,007	73	61	609,864
Sports and entertainment.....	33	29	409,269	33	30	403,889	30	28	363,894
Trade, industry and other related publications.....	188	180	869,183	202	190	1,031,713	208	199	1,131,872
Transportation and travel.....	29	28	311,098	33	32	391,134	35	33	422,130
Miscellaneous.....	17	16	198,738	13	13	136,795	11	11	127,702
Totals.....	664	625	11,372,355	691	642	12,362,395	706	661	12,792,733

A HISTORY OF CANADIAN JOURNALISM, 1752- (CIRCA) 1900*

The press of Canada has had a 200-year history. During that time journalism has grown from a small, weak entity which at first made little impact on the country's development into a large and important component of the national life. A landmark in the story of that growth came at the end of the nineteenth century when Canadian journalism, like the journalism of so many other countries, underwent a rather sudden and impressive metamorphosis. The present article tells the story up to the time of that change. It considers the 150-year period in three time divisions: (1) 1752-1807, the years when the press was being transplanted to Canada from the New England colonies; (2) 1807-1858, the era when the gains made during the earlier half-century were consolidated in Canada's six easternmost provinces; and (3) 1858 to *circa* 1900, a second time of journalistic pioneering when the press moved with the settlers into Canada's western provinces and northern territories. A second article covering the post-1900 history of Canadian journalism proposes to examine the manner in which technology has transformed the press of Canada into the large-scale, heavily capitalized enterprise so familiar today. This article is planned for the next edition of the Canada Year Book.

FIRST PERIOD: THE TRANSPLANT, 1752 TO 1807

The press of British North America began as a transplant from New England rather than as a growth from seed. Most of the newspaper developments that had occurred in Britain after Caxton's introduction of printing in 1478 had been incorporated into New World journalism. Moreover, the press of the colonies which were later to become Canada's

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six easternmost provinces gained from a 50-year pre-hardening process under the semi-pioneering conditions of Massachusetts, Pennsylvania and New York. As England wrested control of the northeastern part of the Continent from the French and as pioneer settlements appeared as isolated pockets in the surrounding wilderness, the first news organs were set up. Thus Halifax gained its first newspaper a scant three years after the Honourable Edward Cornwallis started the seaport town on the rocky soil of Chebucto. Saint John's press arrived with United Empire Loyalists who established the centre, and Quebec's first press venture was launched only a year after the Treaty of Paris gave control of New France to the British. Under the primitive conditions of the day the early printer-editor worked along with the joiner, the blacksmith, the attorney, the linen draper, the tallow candler, the cabinet maker and the soapmaker in serving his small community.

SOME EARLY NEWSPAPERS

The first paper established in the Canada-to-be was the *Halifax Gazette*. Bartholomew Green Jr. established the first printing office in Halifax with a press brought from Boston, but died before he could produce a newspaper; it fell to the lot of his colleague, John Bushell, to launch Canada's pioneer press venture with his issue of the *Halifax Gazette* on Mar. 23, 1752. This event inaugurated a journalistic period that may be considered, only a little arbitrarily, to have lasted until 1807. It was during that 55-year interval that all six of Canada's easternmost provinces made their press beginnings. Quebec's pioneer paper was the *Quebec Gazette*, started by William Brown and Thomas Gilmore in Quebec City in 1764. It survives today as part of the *Quebec Chronicle-Telegraph*, which makes the valid claim that it is the oldest continuing newspaper in North America. John Ryan and William Lewis set up the *Royal St. John Gazette* in Saint John in 1783, a year before the county of Sunbury was detached from Nova Scotia to form the Province of New Brunswick. Prince Edward Island had its journalistic start in 1787 when James Robertson founded the *Royal American Gazette and Weekly Intelligencer* at Charlottetown. The *Upper Canada Gazette*, launched by Louis Roy at Newark (now Niagara-on-the-Lake) in 1793, was the pioneer paper for what later became the Province of Ontario. Newfoundland gained its first news-organ when John Ryan, the New Brunswick press pioneer, set up the *Newfoundland Gazette* in 1807.

The longevity of these early news-sheets was directly related to the support they got. The *Halifax Gazette* under Anthony Henry lasted until 1766 when it was suspended for criticizing the Stamp Act, and was replaced by the *Nova Scotia Gazette*, edited by Robert Fletcher. In 1769, Anthony Henry began the *Nova Scotia Chronicle and Weekly Advertiser*, which absorbed the Fletcher paper the following year, and Henry became, without being so titled, King's Printer again. His renamed paper, the *Nova Scotia Gazette and Weekly Chronicle*, has since been turned into a provincial government gazette. The Henry news-organ was joined in Halifax by John Howe's *Halifax Journal* in 1781 and William Minns' *Weekly Chronicle* in 1786, by which time the latter title had been dropped from the *Gazette*. At the end of the eighteenth century the three Halifax papers enjoyed a tranquil Nova Scotia journalistic monopoly. Alike as three peas in a pod, they amiably shared in the printing patronage being given by the Halifax-centred government. Howe's paper lasted until 1870, while the *Chronicle* perished in 1837.

Meanwhile the only other press ventures in Nova Scotia had not been so successful. At Shelburne, the *Royal American Gazette* of James and Alexander Robertson and Nathaniel Mills, the *Port Roseway Gazetteer and Shelburne Advertiser* of James Robertson Jr. and Thomas and James Swords, and the *Nova Scotia Packet and General Advertiser* of James Humphreys had appeared after the founding of the Loyalist town in 1783. But when the British Government withdrew its financial aid to the centre in 1787, the town collapsed and the papers soon perished.

The second newspaper in New Brunswick was the *Royal Gazette and General Advertiser*, begun in 1785 by Christopher Sower III, who was made King's Printer of the new Province. When Sower left for the United States in 1799, John Ryan succeeded him in his government-appointed office, and the paper, which underwent more than one change of name, became

known as the *Royal Gazette and New Brunswick Advertiser*. It lasted until at least 1814. An abortive production, the *Fredericton Telegraph*, was started by Ryan's son Michael in 1806, but it died early in 1807.

Even the "official" newspapers of Prince Edward Island had a most difficult early existence since government support was of the most niggardly kind. Robertson's *Gazette* certainly lasted no longer than 1789. W. A. Rind printed the *Royal Gazette and Miscellany of the Island of St. John* from July 1791 to July 1792. In 1805 James Douglas Bagnall started the *Royal Herald*, but it was not much longer-lasting.

In Lower Canada the *Quebec Gazette* was joined by a paper of comparable vigour and individuality. This was the *Montreal Gazette*, first published as the French-language *La Gazette du Commerce et Littéraire* by Fleury Mesplet in 1778, and boasting a rather tenuous connection with Benjamin Franklin. Its early vicissitudes sprang from the improvidence of Mesplet and the indiscretions of his outspoken editor, Valentin Jautard, but later, favoured with patronage somewhat similar to that enjoyed by the *Quebec Gazette* in Quebec City, it was able to stand off the challenge of Louis Roy who, in 1795 and 1796, issued a journal practically identical in format and bearing the same name. Edward Edwards was the editor of the original *Montreal Gazette* during this period of strange competition. The older publication still flourishes as a metropolitan daily. *Le Courier de Québec*, published in 1788 by William Moore, lasted for only three editions but its English counterpart, the *Quebec Herald*, had better success. *The Times—Le Cours du Temps*, begun by John Jones in June 1794 and continued by William Vondenvelden, ceased to publish in July 1795. The *Quebec Mercury*, founded by Thomas Cary in 1805, lasted until 1903, and *Le Canadien*, originated by Pierre Bédard and François Blanchet in 1806, continued until 1909. Their greater prominence came during the second press period.

In what is today Ontario, the official *Upper Canada Gazette* was the only paper to enjoy much success until after 1807. Its chief impermanence was that of editorship, with Gideon Tiffany, Silvester Tiffany, Titus Geer Simons, William Waters, John Bennett and John Cameron serving in ill-defined editor-printer roles before the period's end. The paper lasted until at least 1845.

The Tiffany brothers established Upper Canada's second newspaper, the *Canada Constellation*, at Niagara in 1799. When it ceased publication in 1800, Gideon Tiffany left Canada for the United States. Silvester Tiffany began the *Niagara Herald* in January of the following year, but it survived only until August 1802. Upper Canada's fourth newspaper, Joseph Willcocks' *Upper Canada Guardian and Freeman's Journal*, appeared in September 1807 at the very close of the first journalistic era. During its short career, which ended in 1812, it was to take on the new and characteristic tone of the second British North American press period.

CHARACTERISTICS OF EARLY NEWSPAPERS

The character of the earliest newspapers was determined largely by the conditions under which they were produced. Because the pioneer news-sheets of the six eastern colonies were dependent for existence on the revenue which government patronage provided, a large part of their content consisted of government announcements, proclamations, orders and enactments. The first editor to become established was normally King's Printer even though he did not always carry that title. Even the so-called non-government press was frequently paid for publishing governmental matter. Another type of newspaper matter that was especially prominent was foreign news. Since newspaper subscribers were isolated from the more civilized parts of the world, stories from populous places were eagerly read even though they were usually months old. Such reports were preferred to local news accounts which passed by word of mouth faster than the slow weeklies could disseminate them. Advertisements were for the most part small, unemphatic and unimaginative, but they helped to supplement meagre revenues. Insertions ranged from those offering legal services, school lessons and property for sale to the tasteless and lengthy listings of general store commodities.

The pervasive dependence of the early press on government support and patronage had an important effect on newspaper tone between 1752 and 1807. The early editor was almost completely subservient to the officials of the day; since he needed government business, he carefully avoided comment on the conduct of those in authority. With rare and rather accidental exceptions, he refrained from examining contentious political questions. Such general newspaper docility made the characteristic journal of the time a pallid, neutral, harmless sheet without any really vital role to play in the social and political life of the community.

In keeping with its innocuous character, the pages of the journal of that day looked like the dull, unbroken columns of *Hansard*. What few heads it used were chiefly label heads, not much larger than the body type of the stories they introduced. Illustrations were extremely small wood cuts that were generally restricted to the advertisements. Because the papers of 1752 to 1807, unlike their modern counterparts, were read thoroughly from beginning to end by most readers, because stories did not have their endings lopped off at the last minute to make room for late news, and because no overworked head-writers were kept busy supplying headlines for a constant flow of news stories, there was no reason for using the inverted pyramid writing convention common in the modern newspaper. The "lead", as the twentieth century reporter understands it, was unknown. Instead, news accounts were presented in chronological order and written in discursive, literary style. News was not departmentalized, but items were generally thrown into the paper as they came to hand, so that two issues of the same news-organ were usually quite dissimilar in format. Early journals were closer to the modern tabloid than to the modern "bedsheet" urban daily in page size, although they varied considerably in both shape and size. The *Halifax Gazette*, for example, started as a half-sheet of foolscap and was a two-column production. Other papers were folio or quarto, while still others were not one of the standard sizes at all. The early news-sheets rarely contained more than four pages.

Since newspaper production was usually a laborious one-man operation that used a hand-operated, flatbed press employing handset type, press-runs were small and publication no more frequent than once a week. Small populations also kept circulations low. Thus the *Halifax Gazette* began life with only 72 subscribers, the *Royal American Gazette* of Charlottetown had a circulation list of not more than 50 names, and the first issue of the *Quebec Gazette* had only 143 buyers. At the end of the period, the three weeklies in Halifax had a combined circulation of 2,000.

MAGAZINE JOURNALISM

The magazine press was virtually non-existent during the first journalistic period. The earliest periodical was the *Nova Scotia Magazine and Comprehensive Review of Literature, Politics and News*, a Halifax monthly begun in July 1789 with Rev. William Cochran as first editor and John Howe as printer. Later Howe edited it as well. The project was abandoned in March 1792. Second of its kind, *The Quebec Magazine*, half of which was written in French, appeared monthly in Quebec City with Alexander Spark as editor, Samuel Neilson as first, and his brother John as later printer. It existed from August 1792 to May 1794. In the same City, John Neilson also edited *The British American Register* throughout its short life from January to August, 1803. *The Nova Scotia and New Brunswick or Historical, Literary, Theological and Miscellaneous Repository* was established in Halifax in 1806, but it too did not last long.

SECOND PERIOD: CONSOLIDATION AND GROWTH, 1807 TO 1858

Whereas the first period was a time of journalistic pioneering, the 1807-to-1858 era in Canadian journalism was a time of consolidation when the transplant growth of the early years thickened and roots were sunk deeper. There was a steady proliferation of newspapers in the two Canadas and in the four maritime colonies.

NUMERICAL INCREASE

The economic basis for the accelerated newspaper growth of the first half of the nineteenth century was furnished by the great gains made in population and wealth. The suddenly rising activity of the timber trade, which was the first primary industry to provide a return-cargo situation favourable to immigration, the shipbuilding boom in New Brunswick, depressed conditions in Europe, and the postwar attraction of Americans to British North America after 1815, caused new settlers to flock into the young, developing country. They flowed into the seaport towns of Nova Scotia, the river valleys of New Brunswick, and the lakeshores and forests of Upper Canada. The latter province alone increased in population from 213,000 at the start of the influx of the 1820's to 430,000 after 1830. In the decade of the 1840's the combined provinces of Canada gained 677,000. Particularly in Canada West there was a growing specialization in primitive manufacturing, involving a transfer from the home to the local shop. Grist millers, tanners, wagon makers, whisky distillers, brewers, cobblers, weavers and blacksmiths began to establish themselves in the new centres to serve the surrounding community. The enterprising editor found a ready welcome in the group, and as towns sprang up new journals were established.

The mortality rate among such newspapers was high, but where one news-organ died two sprang up to take its place. The result was a steady increase from fewer than 20 news-sheets in 1813 to 291 in 1857. No records have been left to show the year-by-year increase in each province, but some figures from Upper and Lower Canada indicate the trend. In 1813, when many journals were casualties of the war with the United States, there were five newspapers in Lower and one in Upper Canada. In 1824 there were 12 in the former and seven in the latter province. By 1827 the combined total had dropped to 17 but by 1829 the number had grown to 27, by 1831 to 37, and by 1836 to 50. Of the latter, 30 were in Upper Canada. By 1853 Canada West boasted 114 news-organs; by 1857 it had 159. Canada East supported 54 in the latter year.

SOME IMPORTANT NEWSPAPERS OF THE PERIOD

It would be impossible even to list all the newspapers that came into existence during the first half of the nineteenth century. It is perhaps sufficient to mention only the most important. These were notable for their longevity or for their role in the political and social movements of the time or because they were pioneers in their local communities. Upper Canada newspapers boasting a continuous existence (some with name changes) right down to the present day are the *Kingston Gazette*, established by Stephen Miles in 1810, the *Brockville Recorder* (Chauncey Beach, 1820), the *Christian Guardian* (Egerton Ryerson, 1829), the *Belleville Intelligencer* (George Benjamin, 1834), the *Bytown Packet* (William Harris, 1844), the *Toronto Globe* (George Brown, 1844), the *Hamilton Spectator* (Robert Smiley, 1846), and the *London Free Press* (William Sutherland, 1849). Of these the *Christian Guardian* has become *The United Church Observer*, the *Bytown Packet* is now the *Ottawa Citizen*, and the *Globe* is now the *Globe and Mail*. Two other papers important in their day were the *Colonial Advocate* (1824-1834, William Lyon Mackenzie, founder and editor) and the *Toronto Leader* (1852-1878, James Beaty).

A significant Lower Canada paper still publishing is *Le Courrier de St. Hyacinthe* (J. P. Guité and A. De Grandpré, 1853). The *Montreal Herald* (founded by William Gray, 1811) was absorbed by the *Montreal Star* in 1957. *La Minerve*, founded by Ludger Duvernay in 1826, lasted until 1899, and the *Irish Vindicator* (Dr. Daniel Tracey, 1828) perished in 1837. In Nova Scotia the *Novascotian* (George Young, 1824) disappeared as a separate entity in 1926 when it became part of the still flourishing *Chronicle-Herald* of Halifax, while the *Yarmouth Herald* (Alexander Lawson, 1833) has retained both its name and identity. The *Acadian Recorder* (Anthony Holland, 1813) went out of existence in 1930. The New Brunswick paper, the *Saint John Courier* (Henry Chubb, 1811) lasted until 1865. The Charlottetown *Examiner* (Edward Whelan, 1847) ceased publishing in 1922. The *Times and General Commercial Gazette* (J. W. McCoubrey, 1832) flourished in St. John's, Newfoundland, until 1895.

THE GROWTH OF THE PRIVATE ENTERPRISE PRESS

The journalism of 1807 to 1858 differed from that of the earlier era not only in numbers but also from the standpoint of newspaper tone and subject matter. Contributing to the latter was the appearance of a new kind of editor. He was the *entrepreneur* who established a press independent of the revenue from government business. Unlike his predecessor, he made money chiefly by printing advertisements and selling his papers to a gradually widening circle of readers. With this shift from government patronage, he became increasingly self-sufficient and was no longer afraid to involve his newspaper in the major issues of the day. His coverage of local news was still pitifully weak by modern standards, but he more than made up for it by his forthright editorial comment on contentious social and political issues.

NEWSPAPER CONTENT AND STYLE

The subject to which the new-style editor gave most sustained attention was the 'Responsible Government' issue. The seeds of the struggle which led to the ultimate achievement of the important constitutional principle in 1849, were contained, for the Canadas at least, in the granting of Representative Government by the Constitutional Act of 1791. For Lower Canada the concession was a gift unwanted and unasked. The French Canadians were more interested in the preservation of their language, laws and customs than in the questionable advantages of an unfamiliar parliamentary device. They used the new representation in the newly created Assembly to fight for their racial and religious aspirations. In the process they tried to get control of the public purse strings as a means of achieving their ends, and insisted on such concessions as an elected upper house and legislative appointment of judges. In the struggle over these issues there grew up a bitter enmity between the Assembly and the Governor sent out from England. In Upper Canada the battle waged by the Assembly and the people was against the nepotism and privilege of the Family Compact and the inequities of the Clergy Reserves. In the Maritimes, despite traditions of moderation and harmony, there was a similar fight waged against those in power. Out of the conflicts in all three regions came the mature and useful Responsible Government concept so important in the Canadian political system. At the beginning of the movement it is probable that no one, including newspaper editors, could foresee the constitutional consequences of their long fight. It was only very late in the story that even the most enlightened leaders saw the full shape of their achievements.

In the day-to-day campaigning, however, the press played a prominent part. First newspaper participation came just as soon as the lines of political battle were drawn, right after the turn of the nineteenth century. The increasingly bitter rivalry between the *Mercury* and *Le Canadien* in Lower Canada after 1806, the spirited anti-government strictures of Joseph Willcocks' *Upper Canada Guardian* or *Freeman's Journal* which began in Upper Canada in 1807, and the vigorous criticisms of the 'Little Compact' which Anthony Henry Holland in the Maritimes carried in the *Acadian Recorder* from 1813 on launched a long press consideration of the gradually evolving constitutional device. It was a matter that was to feed the fires of general newspaper debate until at least 1849 in five provinces, and was to receive attention from the Newfoundland press as late as 1855.

It was during this development that individual newspapers came to be labelled according to the political stands they took. As those who were debating the Responsible Government issue became increasingly doctrinaire in their views, the majority of the important journals came to be known either as Reform or anti-Reform. Vigorous Reform papers included *Le Canadien*, *La Minerve*, *Irish Vindicator*, *Liberal*, *Colonial Advocate*, *Hamilton Free Press*, *St. Thomas Liberal*, *Colonial Patriot*, *Pictou Chronicle*, *Yarmouth Herald*, *Saint John Courier*, *Head Quarters*, *Prince Edward Island Register*, *Palladium*, and *Newfoundland Patriot*. Supporters of the Tory cause had among their number the *Quebec Mercury*, *Montreal Gazette*, *York Patriot*, *Courier of Upper Canada*, *Kingston Herald*, *Montreal Herald*, *Toronto Mirror*, *Pictou Observer*, *Cross and Olive Branch*, *Christian Messenger*, *Halifax Times*, *Saint John Herald*, *Loyalist and Conservative Advocate*, and *Islander*. Newspapers which avoided the extremes of both the fiery radical and ultra-conservative viewpoint and which might be designated as 'moderate Reform' were well

represented by the *Quebec Gazette* (when it was edited by John Neilson), *Christian Guardian*, Toronto *Examiner* and Montreal *Pilot*. Since it was nearly impossible to divorce politics from the conduct of a newspaper at this time, editors were usually politicians, and politicians were usually editors as well. Thus such important figures of Canadian history as Edward Whelan, Joseph Howe, James Haszard, Etienne Parent, Ludger Duvernay, Dr. Daniel Tracey, William Lyon Mackenzie and Francis Hincks were representatives of both spheres of the country's life.

Political discussion did not make up the entire newspaper content during this period. Some new features appeared. As communities became a little too large for word-of-mouth coverage, local news began slowly to occupy a somewhat larger place in the press. This was not reported in the objective fashion of the modern news story—even accounts of fires, drownings and other disasters were heavily interlarded with opinion and comment. Local items were often displaced by foreign exchanges which were frequently high in human interest value but usually of little consequence to the reader. Long abstracts from literary classics and near-classics still occupied a large part of newspaper space. But these began to share position with features of more practical interest and usefulness to British North Americans, such as the letters of *Agricola* and *Mephoboseth Stepsure* in the Maritimes. Newspaper reporting of Parliament as we know it today had its beginnings during this period. Advertising gained in prominence and importance. At this time advertisers began to get away from mere announcements of their products, and started to make extravagant claims for items they had to sell. This was particularly true of patent medicines, described in terms that can only seem highly offensive to persons living in the present-day society of Drug and Pure Food Acts and of Better Business Bureaux.

Make-up changes were extremely gradual during this period. The innovations made by James Gordon Bennett Sr. in his *New York Herald* had at this time small influence on the British colonies to the north. The occasional exclamatory bold-face headline-effusions of such men as Mackenzie were motivated by political passion rather than a purely commercial desire to catch the eye of the potential reader. In style and tone, editors wrote copy with an elegance and classical scholarship rarely found today. At the same time the nineteenth century editor was guilty of circumlocutions, discursiveness and, on occasion, pretentiousness. The inverted-pyramid construction of the modern news story was unknown to him. An accompaniment of his subjective news-treatment was his bitter and vituperative attacks on political foes and other persons with whom he disagreed. Invective, diatribe and billingsgate became the measure of the political hot temper of British North American constitutional debate of the period, and the newspapers reflected the spirit of the day. Such press outspokenness was not inconsistent with governmental restrictions which were imposed upon newspaper freedom up to at least the middle of the 1807-to-1858 period: the fact was that while they were most severely curbed in their attempts to discuss the behaviour of those in authority, journalists were usually allowed, for the most part by their victims' defaulting of the issue, the utmost freedom in their treatment of private individuals.

GAINS IN PRESS FREEDOM

The struggle for Responsible Government and the new spirit of vigorous independence which animated the journalism of the second period had important consequences in terms of freedom of the press. Editors became daring enough to challenge the authority of officials to dictate absolutely what newspapers might or might not publish. Since those in power were unwilling to give up easily their legal right to censor the press, innumerable clashes between editors and the authorities took place. In the beginning the consequences were pretty disastrous to the journalists. Pierre Bédard, François Blanchet, Ludger Duvernay, Jocelyn Waller, Dr. Daniel Tracey, Bartimus Ferguson, Richard Cockrel, James Durand, Francis Collins, William Lyon Mackenzie, William Wilkie, Anthony Holland, James Haszard, John Hooper, Dr. Edward Barker, Henry Winton, and R. J. Parsons all suffered because of the outspoken stands they took on questions of public interest. Their story is a monotonous repetition of government victory and newspaper defeat.

Despite the predictability of result of such contests, however, there were important gains in terms of press liberty. For one thing, the authorities were finding, to their cost, that it did not pay to martyrize their newspaper enemies. They discovered that their harsh treatment of such men as Ferguson and Collins aroused bitter opposition to their rule, so that they were much more reluctant to punish Mackenzie when he levelled his strictures against their arbitrary acts. Of more critical importance still was Howe's momentous legal victory in a libel trial in Halifax in 1835. The court battle was precipitated by a letter of scathing criticism of the magistracy of the seaport centre which had appeared in Howe's newspaper, the *Novascotian*. Unlike John Peter Zenger in New York a hundred years before, Howe found no lawyers willing to represent him at his trial, so he undertook his own defence. Through his brilliant eloquence rather than his legal skill, he won a resounding victory. It was as significant in Canadian, if not in international, terms as such English precedents as the publication of Milton's *Areopagitica*, the triumph of John Wilkes, the *Letters of Junius*, the victories of Crosby and Oliver, and the ultimate vindication of Cobbett, Wooler, Hone and Carlile.

At the same time the Howe trial was no more consequential to the liberty of the press than were the achievements made in other British North American areas. As with England in an earlier age, many press-freedom victories were won in the political and religious arena. As the citizen of the new land gained the right to believe as he wished about God and about political matters, and as the granting of Responsible Government introduced a new climate of intellectual tolerance, journalism lost many of its shackles. Thus, topics that had been forbidden before were made proper subjects of free debate, and newspaper freedom increased accordingly.

MECHANICAL CHANGES IN THE PRESS

There were several improvements in newspaper production by 1858. The gradual clearing of the forests and the building of roads made news-gathering somewhat easier and faster. The introduction of the magnetic telegraph into the Canadas in 1846 and into the Maritimes in 1849 made it possible for journalists to take advantage of the speed-up of communications brought about by the conversion of ocean-going vessels from sail to steam after 1838. The full effect of new invention was not felt, however, until the third press period. The printing of newspapers gained from the change from wood to iron presses and from the increasing use of power presses after 1840. Another impetus was given by the first manufacture of paper in the Canadas in 1830, but the entire mechanical operation was greatly retarded by the time-consuming handsetting of type which continued to be the method used. What inventions were introduced had the effect of increasing the costs of newspaper equipment and hence of newspapers. Thus it required five annual payments of £210 each to purchase the *Novascotian* in the middle of the period.

The same development that accelerated news-gathering also aided newspaper distribution. In addition to better transportation and communication, a slow increase in literacy enlarged potential readership. At the same time two factors caused difficulties for the editor. High mailing costs made news-organs more expensive and restricted circulations. Then, too, the failure of editors to require payment for subscriptions in advance left uncollected and uncollectable debts owing to them that were often ruinous. Circulations of newspapers continued to be small. The *Novascotian*, which was a leader in its field, was considered to be doing very well when its subscribers reached 1,500.

Despite the introduction of the telegraph, the weekly news-organ was still more important than the daily. In 1833 the Montreal *Daily Advertiser* became the first paper of that frequency in British North America, but it was unusual for its time. It was not until 1849 that the first successful daily began to publish in Canada West, and not until the third press period that the daily newspaper began to surpass the weekly in importance.

THE MAGAZINE PRESS

During the second journalism period the magazine press was considerably more active than during the earlier era. For all that, the periodicals that were established found survival a struggle. Every single publication founded during the first half of the nineteenth century perished after a greater or lesser tenure of life. It was only the constant appearance of new magazines that gave any kind of continuity to this form of journalism. What further weakened any contribution such publications may have made to Canadian life and letters was that much of their content was made up of borrowings from British and American writers, while Canadian writing was usually imitative, derivative, and of inferior literary merit.

Among the most important magazines to appear at this period were: *The Acadian Magazine* (1826-1828, J. S. Cunnabell); *Halifax Monthly Magazine* (1830-1833, J. S. Cunnabell); *The British North American Wesleyan Magazine* (1840-1844 and 1846-1847, James Hogg); *The Amaranth* (1841-1843, Robert Shives); *The Provincial Or Halifax Monthly Magazine* (1852-1853, Mrs. William Lawson); *Literary Garland* (1838-1851, John Gibson); *Anglo-American Magazine* (1852-1855, Rev. R. J. McGeorge); *Canadian Journal* (1852-1878, Henry Youle Hind); *la Bibliothèque Canadienne* (1825-1830, Michel Bibaud); *le Magasin du Bas-Canada* (1832, Michel Bibaud); *l'Observateur* (1830, Michel Bibaud); *l'Encyclopédie Canadienne* (1842-1843, Michel Bibaud); *la Ruche littéraire et politique* (1853-1859, H. E. Chevalier).

THIRD PERIOD: SPREADING GROWTH, 1858 TO (CIRCA) 1900

Canada's third press period may be taken to have lasted from 1858 to about the end of the nineteenth century. What particularly distinguished this newspaper era from its predecessor was a movement of journalism westward. The growth, which had sunk its roots deep into the eastern soil during the second press age, spread in the wake of settlement, beyond the Great Lakes to the prairies and the Pacific Coast area. It was a new time of journalistic pioneering.

The arrival of the settler in the western provinces and northern territories made possible the introduction of the press into the Pacific Coast region and the prairies. What is today British Columbia was a land of fur-traders and explorers until the discovery of gold on the Fraser and Thompson Rivers in 1856 started an influx of settlers that was in full tide by 1858. By that time an estimated 25,000 persons had arrived from California, Oregon, Washington, Utah and other western States, as well as from Hawaii, and Central and South America. These people were largely funnelled through Esquimalt and Victoria, which suddenly became centres capable of supporting a press. Then, as more gold discoveries lured the prospector farther inland along the river valleys, conditions became propitious for the spread of journalism into the interior.

What made Manitoba ready for the new development was the ending of its long isolation from the older portions of British North America. This change of affairs was brought about by several circumstances. Fear of United States domination of the Selkirk colony, heightened by the arrival of a detachment of the American army in Pembina in 1857, caused Canada to send a body of troops to the region soon afterwards. Expeditions by Capt. John Palliser, James Ross and Prof. H. Y. Hind, and the writings of George Brown in the *Globe* and William McDougall in the *North American* aroused interest in the new settlement. When the *Anson Northrup* navigated the Red River to Fort Garry in 1859 the Mississippi steamboat system was extended to Rupert's Land, and when a short time later the railway reached St. Paul, the isolation was broken, and newspapermen were able to start operations.

Saskatchewan and Alberta waited for the inrush of settlers into the empty prairies in the late 1870's and 1880's before press activity began. The Homestead Act of 1872 and the establishment of the North West Council to govern the Territories in the same year; the arrival of the Canadian Pacific Railway in Calgary in 1883; development of wheat varieties more suitable to the growing conditions of the prairies; discovery of the advantages of such

better dry farming practices as deep seeding and summerfallowing; and the introduction of many greatly improved agricultural implements were some of the factors which contributed to the population growth which made prairie journalism possible.

The story of newspaper pioneering in the Canadian North was a repetition of the British Columbia experience, delayed by forty years. Gold was discovered in the Klondike in 1896 and, in consequence, 40,000 newcomers entered the new land during the eighteen months prior to 1900. The resulting establishment of such centres as Dawson City, which had a population of 20,000 in 1899, provided the conditions needed to support a viable press.

PIONEER NEWSPAPERS OF THE WEST

Of Canada's four future western provinces the first to acquire a news-organ was British Columbia. The start was made in Victoria in 1858 when H. C. Williston and Columbus Bartlett founded the *Victoria Gazette*. William Buckingham and William Coldwell launched journalism in Manitoba when they began the *Nor'-Wester* in 1859. Patrick Gammie Laurie's *Saskatchewan Herald* began to serve the town of Battleford in 1878 and so became the Saskatchewan pioneer. The Province of Alberta gained its first newspaper in 1880 when Frank Oliver established the *Edmonton Bulletin*. In the two latter cases, of course, the appearance of the news-organ preceded the formation of the province by many years. Almost equal claim to the title of Yukon pioneer was established in 1898 by two papers to appear in Dawson City. These were the *Klondike Nugget*, owned and edited by George M. Allen, and the *Midnight Sun*, first owned and edited by G. B. Swineheart.

As might be expected, the early northern and western newspapers were at first published under conditions as primitive and precarious as those attending the introduction of the press to British North America between 1752 and 1807. Buckingham and Coldwell hauled their equipment 500 miles from St. Paul to Winnipeg, signed up an Indian Chief named "Hole-In-The-Day" as their first subscriber, and had to thaw out frozen equipment before they began their printing operations. To carry journalism deep into British Columbia, newsmen had to drag their equipment along the rocky banks of precipitous rivers. It is little wonder that one newspaper sold for a dollar a copy. Patrick Gammie Laurie's pioneer venture involved a wagon journey that took him across rivers that did not boast a single ford or ferry. Frank Oliver paid only four dollars for what was really just a toy hand press, used the gift of type and other supplies from his friends on the *Manitoba Free Press*, and so spent only \$21 to get his newspaper started. Lacking other power for their cumbersome drum-cylinder press, the printers of the first paper in Macleod hired a dozen Indian braves to operate their unwieldy equipment in what was a colourful if back-breaking operation.

IMPORTANT NEWSPAPERS OF THE PERIOD

A great many important and successful newspapers appeared during the third press period. They shared the field with such well-established journals surviving from an earlier day as the *Montreal Gazette*, (which was served by such journalists as Thomas, Richard and Robert Smeaton White), *Quebec Gazette* (Frank Carrel), *Montreal Herald* (Edward Goff Penny, James Brierley) and *Toronto Globe* (Gordon Brown, John Cameron, Sir John S. Willison, E. W. Thomson, Edward Farrer, J. A. Ewan), *Hamilton Spectator* (William Southam Sr.), *London Free Press* (Josiah Blackburn), *Brantford Expositor* (T. H. Preston), *Belleville Intelligencer* (Mackenzie Bowell) and *Halifax Chronicle* (William Annand, W. S. Fielding). Newspapers which started life between 1858 and 1900 and which still exist or which entered the life-stream of journals which still publish include: *Mail* (1872, T. C. Patteson, Kit Coleman), *Empire* (1887, Louis P. Kribs), *Toronto Telegram* (1876, John Ross Robertson, John "Black Jack" Robinson), *Toronto Star* (1892, Joseph E. Atkinson), *Ottawa Journal* (1885, P. D. Ross), *St. Catharines Standard* (1891), *Kitchener-Waterloo Record* (1878), *Oshawa Times-Gazette* (1871), *Montreal Star* (1869, Hugh Graham, later Lord Atholstan), *La Patrie* (1879, Honoré Beaugrand, P. M. Sauvalle, Israel Tarte), *La Presse* (1884, Tréfilé Berthiaume, J. A. N. Provencher, C. A. Dansereau), *L'Événement* (1867, Hector Fabre), *Halifax Herald* (1875, William Dennis, J. J. Stewart), *Halifax Star*

(1873), *Halifax Mail* (1878), *Fredericton Gleaner* (1880), *Saint John Globe* (1858), *Saint John Times* (1868), *Saint John Telegraph* (1862, John Livingstone, J. E. B. McCready, Charles H. Lugin, James Hannay), *Saint John Journal* (1865, William Elder), *Moncton Transcript* (1882, James Hannay, John T. Hawke), *Moncton Times* (1868), Weymouth, later *Moncton L'Evangeline* (1887, Valentine Landry), *Charlottetown Patriot* (1857, David Laird), *Charlottetown Guardian of the Gulf* (established as *Presbyterian Union* in the 1870's, Rev. S. G. Lawson, W. L. Cotton), *St. John's Telegram* (1879, W. J. Herder, T. D. Carew, P. K. Devine), *St. John's Daily News* (1894, Dr. J. A. Robinson, H. Y. Mott), *Victoria Colonist* (1858, Amor de Cosmos), *Victoria Times* (1881), *Nanaimo Free Press* (1874), *New Westminster British Columbian* (1860, John Robson), *Vancouver Sun* (1886), *Vancouver Province* (1894, W. C. Nichol), *Manitoba Free Press* (1872, W. F. Luxton, J. A. Kenny), *Winnipeg Tribune* (1890, R. L. Richardson), *Brandon Sun* (1882), *Calgary Herald* (1883, T. B. Braden, A. M. Armour, H. S. Cayley), *Medicine Hat News* (begun in 1885 as the *Times* by Braden and Armour), *Regina Leader-Post* (1883, N. F. Davin), *Moose Jaw Times* (1889, J. N. Macdonald) and *Prince Albert Herald* (1896). Some journalists who served on papers which are mentioned in an earlier section of this article as having lasted right through the third period only to perish during the fourth were J. P. Tardivel, Ernest Myrand and J. E. Cauchon of *Le Canadien*, H. W. Blackadar Jr. and Sr., and C. C. Blackadar of the *Acadian Recorder*, and Honoré Mercier of *Le Courrier de St. Hyacinthe*. Napoleon Aubin and L. L. Viger served on *Le Pays*, a paper which also originated in an earlier day and which is now extinct. Joseph Tassé and Oscar Dunn were connected with *La Minerve*, previously mentioned, and M. A. Plamondon served on *Le National* (1855-1878), J. B. E. Dorion on *Le Défricheur* (1862-1867) and E. T. Sanders and C. E. D. Wood on the *Fort Macleod Gazette* (1882-1908).

NUMERICAL INCREASE

During the third press period, the press of Western Canada was achieving much the same kind of development that the journalism of Eastern Canada had accomplished during its pioneering stages. At the same time, the newspapers in the older part of the country were making good progress on their own account. The following table shows the increase in numbers during the period.

NUMBERS OF PERIODICALS IN BRITISH NORTH AMERICA, 1857-1900

NOTE.—Includes territory of present-day Canada.

Periodical	1857	1864	1874	1881	1891	1895	1900
	No.	No.	No.	No.	No.	No.	No.
Dailies.....	..	23	46	61	91	..	121
Tri-weeklies.....	..	27	..	11	7	..	6
Semi-weeklies.....	..	16	..	22	17	..	48
Weeklies.....	..	226	330	413	580	..	804
Tri-monthlies.....	1
Bi-weeklies and semi-monthlies.....	..	6	..	10	20	..	36
Every 3rd weeklies.....	1
Monthlies.....	..	27	41	58	119	..	202
Bi-monthlies.....	2	1	..	2
Quarterlies.....	2	2	..	5
TOTALS.....	291 ¹	298 ²	470 ³	579 ⁴	837 ⁴	919 ⁶	1,226 ⁶

¹ *Canadian Newspaper Directory, 1892*. A. McKim and Co., Toronto, 1892, p. 58. (Only the total for all publications is given in this article.)

² *Canadian Newspaper Directory, 1892*. A. McKim and Co., Toronto, 1892, p. 59. (The sum of the various papers does not agree with the total in the second column because the different editions of the same paper were not counted as separates.)

³ *Canadian Newspaper Directory, 1892*. A. McKim and Co., Toronto, 1892, p. 59. (The tri-weeklies, semi-weeklies and semi-monthlies are omitted from this table, but all are included in the totals.)

⁴ *Canadian Newspaper Directory, 1892*. A. McKim and Co., Toronto, 1892, p. 59.

⁵ J. Castell Hopkins, *Canada, An Encyclopedia of the Country*, Volume V, Linscott Publishing Company, Toronto, 1899, p. 190. (No classification of the numbers of various publications is given in the source article.)

⁶ *Directory of Canadian Newspapers, 1900*. A. McKim and Co., Toronto, 1900, p. 12.

NEWSPAPER CONTENT AND STYLE

The subject matter of Canadian journalism in the last half of the nineteenth century was largely determined by the events and issues of the day. Although domestic political developments continued to occupy a significant share of newspaper attention, discussion of the Responsible Government question was replaced in turn by a consideration of Confederation, the Washington Treaty, the Pacific Scandal, the building of the Canadian Pacific Railway, the two Riel Rebellions and the Manitoba School question. In addition, particularly towards the end of the period, the press gave more attention to questions of international concern. The papers had always carried foreign news, but formerly the coverage had been that of the remote observer, and the newer reports gave a sense that readers were participants in world affairs. This change was partly caused by the fact that, with speedier news-gathering methods, foreign items no longer appeared as ancient history, and partly because increasing Canadian autonomy indicated that Canada was preparing for greater international activity. The interest and involvement of Canada in such matters as the South African War, the Alaska boundary dispute and conferences on pelagic sealing, for example, are readily understandable, but citizens the of new country showed themselves to be interested observers of such events as the Dreyfus trial—a fact which Canadian newspaper reporting amply demonstrated.

During the 1858-to-1900 period newspaper reports became freer of the editorial opinion that had marked their earlier counterpart, but the news-story still lacked the format of the twentieth century prototype. Editorial comment, now somewhat more closely confined to the editorial page, was still characterized by the vitriolic abusiveness that had disgraced earlier newspapers. A comparable blot on newspaper records was the practice of writing careless libel, of writing matter which would bring convictions for contempt of court today, and of commenting freely on questions which now would be classified as *sub judice*. Advertising, particularly of patent medicines, continued to be irresponsible, such matter being shamelessly disguised as news accounts with extravagant claims being made for the curative and life-saving powers of the items sold. On occasion, such deadly articles as devices to procure abortion were offered openly in the press.

While very few new *kinds* of stories appeared in the late Victorian press, there was a growing tendency to departmentalize the news. A cautious use of bolder headlines was made, but eight-column, 72-point and larger banners were still rare. Label heads continued to appear fairly frequently, but the more exciting stories began to carry several decks after the fashion of the *New York Herald*. These gained variety through inverted pyramid and hanging indent arrangements.

Pictures, mainly line drawings, began to make their first modest appearance in the daily and weekly press. On June 3, 1871, the *Canadian Illustrated News* carried a photograph of Montreal's new Custom House. According to the *Montreal Gazette* of Oct. 13, 1956, this was the "first time that a photograph had been successfully transmitted to the printed page." However, it was not until Max Levy of Philadelphia developed the cross-ruled screen in 1886 that a really successful method of reproducing photographs in newspapers was achieved. In Canada the *Dominion Illustrated* introduced a practical form of the half-tone illustration in 1888, but the possibilities of the new device were little realized by the end of the century.

MECHANICAL CHANGES IN THE PRESS

Many mechanical improvements in the press occurred during the 1858-to-1900 period. These included the introduction of wood pulp manufacture into Canada in 1866, the first adoption of electrically driven rotary power presses after 1890, and the use of better folder attachments and improved inks. But perhaps the most revolutionary invention of all was Mergenthaler's linotype, first demonstrated in the *New York Tribune* in 1886, and available in improved form in 1889. This was to find increasing Canadian use from the 1890's onward. It was these inventions primarily that caused the dramatic transformation of the press which characterized Canada's fourth journalistic period.

THE DAILY NEWSPAPER

Such inventions of the second press period as the magnetic telegraph began to produce results during the third. These improvements contributed greatly to the growing "day-to-dayness" of the newspapers of the new Dominion, and accounted in no small measure for the growing sense of nearness of distant events previously referred to. The daily paper increasingly dominated the newspaper field. Whereas there had been 20 daily newspapers in Upper and Lower Canada in 1857, the provinces that entered Confederation in 1867 had 46 dailies in 1874, 61 in 1881, 91 in 1891, and 121 in 1900. It should not be inferred from the relative increase in importance of the daily that, in absolute terms, the weekly was declining. The table on p. 930 shows otherwise. Moreover, the weekly had not completely abdicated the national and international news field in favour of the daily newspaper to become the community press as it was largely to do by the mid-twentieth century. The continuing interest of the weekly in matters of larger than regional concern was particularly evident in the press of Western Canada.

The increase in daily newspaper numbers conveys the magnitude of the change occurring only when considered in conjunction with the accompanying circulation growth, and also with the fact that a daily is issued six times as often as a weekly. In 1900, daily newspapers had 570,000 subscribers. *La Presse* led the field with a circulation of 66,500, the *Montreal Star* following with 50,312, the *Toronto News* had 43,635 and the *Toronto Globe*, 36,000. It should be noted that technological change was not the only factor contributing to this rise of newspaper circulations. More advantageous postal rates, a larger population and a continuous growth of literacy had their effects as well.

Another consequence of improved press equipment was a rise in press costs. Thus, in 1883, the *Regina Leader*, not Canada's largest newspaper by any means, was established with a capital of \$20,000. Nor was the *Vancouver Province* the richest journal in Canada in 1899 when it had a capitalization of \$100,000. Such enterprises as these required larger staffs than their 1856 predecessors. In place of the publisher-printer-editor factotum who had issued his news-sheet in 1837 Rebellion days, 86 persons were employed on the *News-Advertiser*, *World*, and *Telegram* in Vancouver in 1892. In 1899, the *Vancouver Province* was produced by an editor, a subscription manager, city editor, advertising manager, three reporters, an accountant, two clerks, a composing-room foreman, six compositors, a pressroom foreman and two stereotypers. *La Presse*, having a circulation thirteen times as great, obviously required a larger staff.

PRESS ORGANIZATIONS

A new element of the newspaper story during the period was the beginning of press associations. The most important of these was the Canadian Press Association, which was started in 1859. It was in no sense a closely knit professional body, but rather a loose confraternity of journalists whose main interests were social and occupational rather than business. It had as lesser counterparts the Province of Quebec Press Association, founded in 1876; Eastern Ontario Press Association, 1879; Presse Associée de la Province de Québec, 1882; Eastern Townships Press Association, 1889; Western Canada Press Association, and the Ottawa Valley Press Association.

GAINS IN PRESS FREEDOM

The third press period brought important gains in newspaper freedom. Whereas earlier progress had been accomplished through court trials and a widening tolerance in related fields, the new advances were achieved through new legislation. The advantage gained was twofold: in the first place, the new laws granted certain concessions not previously permitted under common law practice; secondly, by defining what a newspaper was and by making more explicit what did and what did not constitute defamation in the press, these enactments permitted editors to see more clearly what publishing ground was safe and what was dangerous. The areas of greatest gain were in the definition of defences open against libel charges and a spelling out of the types of report which were to be privileged in the press.

The new legislation was based on Fox's Libel Act of 1792, Lord Campbell's Act of 1843, the Newspaper Libel and Registration Act of 1881, and the Law of Libel Amendment Act, 1888, all of them British legislation. Criminal law in the matter was enacted for Canada in 1892. This had, of course, a uniform, nation-wide application since the Criminal Code is an enactment of the Federal Parliament. Civil law differs from province to province, with Quebec legislation, based as it is on the Napoleonic Code, showing the widest divergence from the general pattern. Prince Edward Island, which continued to rely largely on common law practice, got its Libel Act in 1865; this was overhauled by the Statutes of Prince Edward Island of 1889. In 1892 the Criminal Code of Canada repeated those sections of the Act which dealt with criminal law. Ontario was served by an Act of 1882 which was superseded by provisions of the Revised Statutes of 1897. Since certain parts of the 1887 legislation dealing with provincial elections had reference to defamation, these provisions were also incorporated into the 1897 revision. Quebec had no libel Act, but Sections 2924 to 2938 of the Revised Statutes of 1888 laid down provisions under which newspapers might publish. Newfoundland's legislation on the question was provided by the Consolidated Statutes of 1892, and covered both criminal and civil law. The Revised Statutes of British Columbia of 1897 furnished that Province with its Libel and Slander Act. Nova Scotia's legislation came in 1900, while that of Manitoba, which had both a Libel Act and a Newspaper Act, was passed in 1902, and that of New Brunswick in 1903 as one of the Consolidated Statutes. Since Saskatchewan and Alberta were not made provinces until 1905, their newspapers did not become subject to provincial laws until after that date.

THE MAGAZINE PRESS

The magazine press exhibited the same kind of discontinuity during the third journalism period that had characterized the periodical publications during the second. Without the same fecundity that marked newspaper journalism, magazines made a weaker showing in the new country, particularly because so many of the monthly, and even less frequently published ventures, were so short-lived. It is to their credit that there were still many publishing entrepreneurs who refused to be discouraged by the examples of failure set, with monotonous regularity, by their predecessors. An impetus to the growth of Canadian magazine production was provided by the achievement of Confederation in 1867, more particularly in English Canada, where there was a greater need than in French Canada for such a unifying event to give a sense of national identity to the literary contributors to such publications.

The more prominent magazines that came into being during this journalistic era (with their first editors or publishers and dates) included the *British American Magazine* (1863-1864, H. Y. Hind), *Stewart's Quarterly* (1867-1872, Dr. George Stewart), *Maritime Monthly* (1873- (circa) 1876, H. L. Spencer, Rev. James Bennet), *New Dominion Monthly* (1867-1879, John Dougal), *Grip* (1873-1894, J. W. Bengough), *Saturday Night* (1887- present, E. E. Shepherd), *Canadian Magazine* (1893-1939, J. Gordon Mowat), *Canadian Monthly and National Review* (1872-1882, G. Mercer Adam), *Week* (1883-1896, Goldwin Smith, Charles G. D. Roberts), *Bystander* (1880-1882, 1890-1891, Goldwin Smith), *Les Soirées Canadiennes* (1861-1865, H. R. Casgrain, A. Gérin-Lajoie, J. C. Taché, Dr. Hubert La Rue), *Le Foyer Canadien* (1863-1866, H. R. Casgrain, A. Gérin-Lajoie, J. C. Taché, Dr. Hubert La Rue), *La Revue Canadienne* (1864-1873), *L'Echo de la France* (1865-1869, L. Ricard), *La Revue de Montréal* (1877-1881, T. A. Chandonnet), *Le Canada Français* (1888-1891, T. E. Hamel), *Le Chercheur* (1888-1890, M. J. F. Dumontier), *La Revue Nationale* (1895-1897, J. D. Chartrand), *Le Courrier du Livre* (1896-1901, R. Renault), *Nation* (1874-1876, Goldwin Smith), *Nova Scotia Illustrated* (1895, J. H. Bradford), *Lake Magazine* (1892-1893, D. K. Mason), *Massey's Magazine* (1896-1897), *New Brunswick Magazine* (1898-1905, W. K. Reynolds), and *Prince Edward Island Magazine* (1899-1905, Archibald Irwin).

The development of the journalism of Canada is a continuing story—a story of accelerating growth. Evidence of its constant progress is to be seen in the facts of increased circulation, wider readership, greater frequencies, extended areas of news coverage, speedier news-gathering services, increasing press wordage and enlarged newspaper plants, as well as in the qualitative refinements and improvements of the “art preservative of the arts”. The press of Canada today is indeed the result of the impressive technological developments of the past fifty years. Nevertheless, it may be said to have received considerable shaping from its first 150 years of life.

CHAPTER XXI.—DOMESTIC TRADE

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

PART I.—THE MOVEMENT AND MARKETING OF COMMODITIES

Domestic trade is broad and complicated; it encompasses all values added to commodities traded, provincially and interprovincially, by agencies and services connected with the storage, distribution and sale of goods, such as railways, steamships, warehouses, wholesale and retail stores, financial institutions, etc. Taken in a wide sense, it embraces various professional and personal services including those directed to the amusement of the people, such as theatres and sports. Only certain phases of this broad field are covered here and, wherever possible, cross references are given to related material appearing in other Chapters. The arrangement of material in a volume such as the Year Book is governed by the necessity of interpretation from various angles. The Index will be found useful in this respect.

Section 1.—Merchandising and Service Establishments*

Complete coverage of the business of wholesale and retail trades and of service establishments is attempted only as part of the decennial census. The first such detailed survey was taken in connection with the 1931 Census and related to business transacted during the calendar year 1930. Similar detailed records were again secured with the 1941 and 1951 Censuses. The results of the 1930 and 1941 Censuses of Merchandising and Service Establishments are contained in Vols. X and XI of the Census reports for those years and the results of the 1951 Census of Distribution in Vols. VII and VIII of the 1951 Census reports. Summary data for 1951 are given in the 1955 Year Book, pp. 953-977.

The information collected at the census is supplemented in intercensal years by monthly, quarterly and annual surveys on the more important phases of the retail, wholesale and service trades—sample surveys for some businesses and full coverage for others. The 1951 Census formed a new base for such surveys and certain improvements have been implemented for continuance during the 1951-61 intercensal period.

Current information available on the more important phases of the distributive trades is given in the following Subsections. Estimates for the years prior to 1951 have been revised in accordance with the census base.

Subsection 1.—Wholesale Trade

Wholesale Sales.—Estimated sales of wholesalers expanded from \$5,744,355,000 in 1951 to \$7,720,353,000 in 1956. These figures include only wholesalers proper, i.e., they exclude agents and brokers and manufacturers' sales branches. Sales estimates are subject to revision and have not been adjusted for price changes.

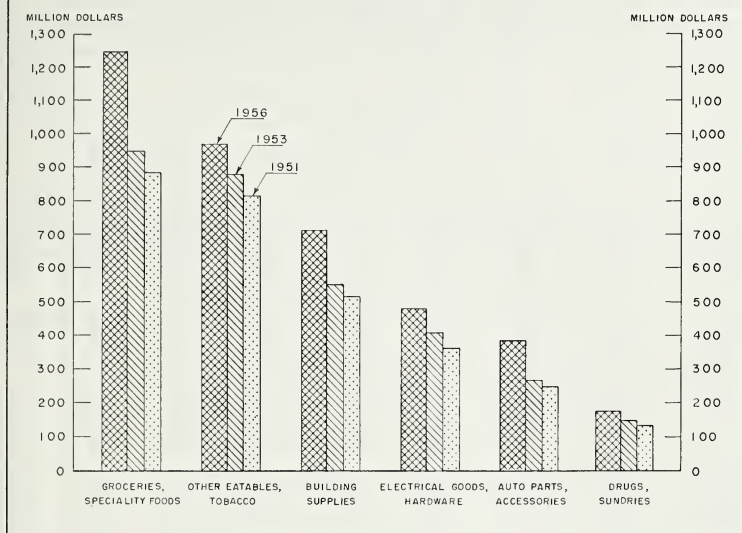
* Prepared in the Merchandising and Services Section of the Industry and Merchandising Division, Dominion Bureau of Statistics.

1.—Wholesale Sales by Kind of Business 1953-56

NOTE.—Includes only wholesalers proper, i.e., firms performing the function of buying merchandise on their own account for resale.

Kind of Business	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000
Fresh fruits and vegetables.....	202,027	211,145	217,540	233,446
Groceries and food specialties.....	944,999	1,036,220	1,139,659	1,246,104
Meat and dairy products.....	171,759	171,108	164,192	173,443
Clothing and furnishings.....	88,907	80,944	86,469	89,531
Footwear.....	28,434	26,770	29,064	30,691
Other textile and clothing accessories.....	180,711	174,179	183,598	199,258
Drugs and drug sundries.....	147,695	153,124	165,974	178,409
Household electrical appliances.....	138,179	150,136	167,894	168,601
Farm machinery.....	71,247	52,084	60,590	72,726
Coal and coke.....	197,161	179,007	178,408	202,900
Hardware.....	268,808	260,809	283,522	313,417
Construction materials and supplies, including lumber.....	550,448	546,698	655,254	709,996
Industrial and transportation equipment and supplies.....	533,486	462,233	571,918	764,789
Commercial, institutional and service equipment and supplies..	82,954	89,240	99,017	107,887
Automotive parts and accessories.....	269,308	262,035	352,323	386,436
Newsprint, paper and paper products.....	236,752	249,481	264,171	292,400
Tobacco, confectionery and soft drinks.....	504,556	498,537	509,840	562,413
Other.....	1,625,480	1,458,815	1,620,077	1,987,906
Totals, All Trades.....	6,242,912	6,062,566	6,749,510	7,720,353

WHOLESALE SALES BY SELECTED GROUPS OF BUSINESS,
1951, 1953 AND 1956



Operating Results of Wholesalers.—The fifth biennial survey of the operating results of wholesalers for certain trades shows operating expenses and profits in ratio to net sales for the year 1955. Individual trades are dealt with in detail in DBS Bulletins.

2.—Operating Results of Selected Wholesale Trades 1955

(Percentage of Net Sales)

Kind of Business	Gross Profit	Selling Expense	Ware-house and Delivery Expense	Administrative and General Expense	Net Operating Profit	Net Non-trading Income	Net Profit before Income Tax
Grocery.....	7.20	1.37	2.25	3.20	0.38	0.56	0.94
Fruits and vegetables.....	11.50	1.96	4.92	3.99	0.63	0.07	0.70
Tobacco and confectionery.....	7.33	2.18	1.79	2.78	0.58	0.14	0.72
Dry goods.....	16.43	5.18	2.96	6.95	1.34	0.55	1.89
Piece goods.....	16.44	4.85	2.33	8.55	0.71	0.48	1.19
Footwear.....	16.40	4.45	2.85	7.22	1.88	0.51	2.39
Automotive parts and accessories.....	25.41	7.38	4.62	9.63	3.78	0.41	4.19
Hardware.....	19.17	4.57	3.29	7.30	4.01	0.04	4.05
Plumbing and heating supplies.....	16.37	3.47	2.96	6.97	2.97	0.01	2.98
Drug.....	8.71	0.82	3.27	4.40	0.22	0.11	0.33
Household appliances and electrical supplies.....	18.67	6.92	1.88	7.18	2.69	0.15	2.84

Subsection 2.—Retail Trade

The trend of retail trade is one of the best general indicators of the economic condition of the country. It is through retail stores that most goods are ultimately sold and such sales reflect the financial strength of the consumer except in times of short supply. The estimated value of retail sales increased five-fold during the 1930-56 period. These estimates, not adjusted for price changes, are shown by province in Table 3 and by kind of business in Table 4.

3.—Retail Trade by Province 1930-56

Year	Atlantic Provinces ¹	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia ²	Canada ³
	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000
1930.....	197	646	1,091	188	188	175	251	2,736
1931.....	172	558	945	153	133	134	210	2,305
1932.....	140	462	783	131	112	115	165	1,908
1933.....	129	419	735	121	103	109	157	1,773
1934.....	147	454	833	131	115	125	179	1,984
1935.....	157	473	875	139	124	137	200	2,105
1936.....	170	518	941	150	138	147	225	2,289
1937.....	199	605	1,068	165	136	165	255	2,593
1938.....	188	598	1,026	164	136	177	240	2,530
1939.....	196	602	1,039	166	151	180	242	2,578
1940.....	235	683	1,191	182	174	198	273	2,935
1941.....	279	820	1,388	193	189	228	318	3,415
1942.....	301	876	1,447	206	201	243	346	3,619
1943.....	319	913	1,488	220	219	266	362	3,786
1944.....	351	976	1,574	243	249	296	404	4,093
1945.....	387	1,081	1,774	269	279	329	455	4,573
1946.....	491	1,342	2,265	338	341	416	593	5,787
1947.....	564	1,621	2,721	407	410	504	737	6,963
1948.....	607	1,792	3,067	466	473	611	818	7,835
1949.....	734	1,872	3,294	523	538	697	874	8,532
1950.....	822	2,183	3,715	567	571	777	982	9,617
1951.....	899	2,443	4,130	610	659	854	1,100	10,693
1952.....	982	2,635	4,363	651	764	939	1,177	11,532
1953.....	1,018 [*]	2,756	4,616	677	845	987	1,228	12,128
1954 [*]	1,025	2,798	4,634	637	758	964	1,249	12,066
1955.....	1,127	3,006	5,115	669	748	1,035	1,412	13,112
1956 ^p	1,198	3,269	5,403	701	815	1,146	1,557	14,089

¹ Newfoundland included from 1949.

² Includes the Yukon and Northwest Territories.

³ Totals are not the exact addition of the components because of rounding of the figures.

4.—Retail Trade by Kind of Business 1951 and 1954-56

Kind of Business	1951	1954	1955	1956 ^p
	\$'000,000	\$'000,000	\$'000,000	\$'000,000
Grocery and combination stores.....	1,905	2,279	2,430	2,621
Other food and beverage stores.....	903	924	950	1,001
General stores.....	525	515	530	558
Department stores.....	910	1,062	1,150	1,242
Variety stores.....	196	234	250	275
Motor vehicle dealers.....	1,884	2,029	2,370	2,547
Garages and filling stations.....	479	632	718	757
Men's clothing stores.....	203	207	214	227
Family clothing stores.....	192	191	200	212
Women's clothing stores.....	193	221	225	243
Shoe stores.....	112	121	123	132
Hardware stores.....	228	247	256	274
Lumber and building material dealers.....	359	406	451	492

4.—Retail Trade by Kind of Business 1951 and 1954-56—concluded

Kind of Business	1951	1954	1955	1956 ^a
	\$'000,000	\$'000,000	\$'000,000	\$'000,000
Furniture, appliance and radio dealers.....	358	486	541	576
Restaurants.....	438	453	468	490
Fuel dealers.....	233	250	268	297
Drug stores.....	249	282	300	317
Jewellery stores.....	105	116	124	131
Miscellaneous.....	1,221	1,412	1,545	1,697
Totals, All Trades.....	10,693	12,066	13,112	14,089

Retail Chain Stores.—Retail chains are defined as companies operating four or more retail outlets in the same or related kinds of business. A consistent rise in sales has been evident since statistics were first compiled on chain store operations in 1930.

5.—Retail Chain Store Statistics 1930 and 1941-56

Year	Stores	Net Retail Sales	Salaries and Wages Paid to Store Employees	Stocks on Hand End of Year		Accounts Outstanding End of Year
				Stores	Warehouses	
	Av. No.	\$'000	\$'000	\$'000	\$'000	\$'000
1930.....	8,097	487,336	50,405	60,457	..	..
1941.....	7,622	639,210	57,777	68,619	20,976	38,376
1942.....	7,010	687,447	57,654	66,940	22,633	..
1943.....	6,780	703,950	58,804	67,628	22,602	15,527
1944.....	6,560	769,643	63,300	66,944	21,855	15,093
1945.....	6,580	876,209	68,196	68,247	29,013	16,368
1946.....	6,559	1,014,847	77,474	85,345	37,436	19,643
1947.....	6,716	1,177,323	91,266	105,040	43,546	31,492
1948.....	6,821	1,335,735	107,450	119,132	46,330	40,378
1949.....	6,839	1,420,081	115,903	123,696	46,755	50,001
1950.....	7,155	1,559,693	129,334	159,083	60,501	65,000
1951.....	7,846	1,775,744	153,599	186,562	60,490	53,816
1952.....	7,766	1,924,873	154,642	172,886	55,215	77,475
1953.....	7,835	2,048,228	171,167	179,704	52,096	91,538
1954.....	8,136	2,146,635	181,509	191,049	57,814	102,747
1955.....	8,274	2,353,955	199,611	205,833	63,120	127,362
1956.....	8,559	2,647,055	221,136	232,392	72,183	143,357

6.—Retail Chain Store Sales by Province and by Kind of Business 1953-56

Province	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000
Province				
Newfoundland.....	14,281	13,865	12,982	15,267
Maritime Provinces.....	137,428	141,236	155,728	166,946
Quebec.....	422,586	447,238	488,374	540,628
Ontario.....	942,016	999,571	1,096,030	1,230,388
Manitoba.....	87,232	86,523	94,235	100,591
Saskatchewan.....	95,337	96,280	102,129	111,353
Alberta.....	143,518	146,932	160,909	182,111
British Columbia.....	200,422	209,202	237,734	289,846
Yukon and Northwest Territories.....	5,408	5,788	5,835	6,925
Canada.....	2,048,228	2,146,635	2,353,955	2,647,055

6.—Retail Chain Store Sales by Province and by Kind of Business 1953-56—concluded

Kind of Business	1953	1954	1955	1956
Kind of Business	\$'000	\$'000	\$'000	\$'000
Foods and Beverages¹.....	1,265,514	1,353,278	1,486,644	1,685,394
Combination grocery and meat stores.....	779,668	870,580	970,793	1,104,060
Restaurants.....	34,442	33,900	34,602	36,374
Alcoholic beverage stores.....	435,538	432,714	465,772	527,952
General Merchandise (excl. department stores)¹....	254,299	261,495	280,871	313,976
General stores.....	36,541	36,560	37,450	41,144
Variety stores.....	188,475	194,248	207,831	229,307
Automotive.....	33,418	35,014	39,923	42,043
Apparel and Accessories¹.....	157,421	162,239	175,077	190,674
Men's and boys' clothing and furnishings.....	24,734	25,350	27,037	28,866
Women's clothing stores.....	49,257	54,843	61,897	67,269
Family clothing stores.....	36,241	32,069	33,418	36,347
Shoes.....	43,470	45,384	48,054	53,433
Building Materials and Hardware.....	107,034	104,982	114,963	141,316
Furniture and Household Appliance.....	99,880	99,536	120,515	137,059
Other Retail Stores¹.....	130,662	130,090	135,962	136,592
Drug stores.....	34,805	35,908	36,660	41,299
Jewellery stores.....	38,238	38,954	43,016	46,301

¹ Includes other kinds of business not shown separately.

Operating Results of Retail Chain Stores.—The 1955 operating results of selected trades show generally higher gross profit ratios than 1954. However, operating expenses more than offset this advantage and, as a consequence, reduced ratios of net profit were reported in most cases. Table 7 gives summary data for ten kinds of business in the field of retail chain stores for 1955.

7.—Operating Results of Retail Chain Stores for Selected Kinds of Business 1955

(Percentage of Net Sales)

Kind of Business	Gross Profit	Salaries and Wages	Occupancy ¹	Total Operating Expenses ²	Net Operating Profit	Net Non-trading Income	Net Profit before Income Tax
Grocery.....	16.03	8.75	1.94	15.32	0.71	0.11	0.82
Combination grocery and meat.....	16.45	7.67	1.39	13.40	3.05	0.16	3.21
Meat markets.....	18.75	11.01	1.63	17.63	1.12	0.02 ³	1.10
Men's clothing.....	30.97	14.43	5.02	28.39	2.58	0.40	2.98
Women's clothing.....	32.70	14.07	6.42	28.77	3.93	0.55	4.48
Family clothing.....	33.35	16.71	4.89	31.64	1.71	0.25	1.96
Shoe.....	32.95	15.35	5.84	27.98	4.97	0.21 ³	4.76
Variety.....	38.30	17.86	5.02	29.03	9.27	0.45	9.72
Drug.....	34.93	19.07	5.05	31.67	3.26	0.75	4.01
Furniture.....	28.50	12.30	3.37	25.09	3.41	3.85	7.26

¹ Includes taxes and insurance, light, heat and power, repairs, maintenance, depreciation (except on delivery equipment) and rentals on rented premises. ² Includes salaries and wages and occupancy expenses. ³ Net non-trading expenses.

Operating Results of Independent Retail Stores.—Figures for 1954 for twenty kinds of business are contained in Table 8. Separate ratios are shown for unincorporated and incorporated businesses. Salaries of proprietors of unincorporated stores are included in net profit while salaries of executives of incorporated stores form part of the expense item of salaries and wages.

8.—Operating Ratios of Independent Retail Stores by Kind of Business 1954

(Percentage of Net Sales)

Kind of Business	Cost of Goods Sold	Gross Profit	Salaries and Wages ¹	Occupancy Expenses ²	Total Operating Expenses ³	Net Profit before Income Tax ⁴
Unincorporated						
Grocery.....	85.62	14.38	2.89	3.30	8.73	5.65
Combination.....	84.91	15.09	4.75	2.93	10.69	4.40
Meat.....	81.10	18.90	5.53	3.37	12.53	6.37
Confectionery.....	82.43	17.57	2.79	5.60	10.23	7.34
Fruits and vegetables.....	81.58	18.42	4.35	4.46	12.47	5.95
Men's clothing.....	72.98	27.02	6.43	5.74	17.58	9.44
Family clothing.....	74.12	25.88	7.27	5.38	17.22	8.66
Women's clothing.....	72.62	27.38	8.09	6.44	19.78	7.60
Family shoe.....	72.23	27.77	7.74	5.76	17.55	10.22
General stores.....	85.08	14.92	3.74	2.96	9.24	5.68
Furniture.....	73.12	26.88	7.15	5.27	19.72	7.16
Household appliance, radio and television.....	73.93	26.07	8.86	4.18	19.46	6.61
Hardware.....	74.17	25.83	8.09	4.52	16.83	9.00
Restaurants.....	62.31	37.69	16.17	10.33	30.17	7.52
Fuel dealers.....	77.03	22.97	3.61	2.48	17.56	5.41
Drug.....	70.18	29.82	9.20	4.77	18.23	11.59
Jewellery.....	59.81	40.19	10.07	8.30	25.53	14.66
Tobacco.....	81.74	18.26	4.09	5.18	10.94	7.32
Filling stations.....	79.20	20.80	6.61	4.64	13.70	7.10
Garages.....	69.41	30.59	11.40	5.70	21.14	9.45
Incorporated						
Men's clothing.....	70.17	29.83	15.75	6.09	28.09	1.74
Family clothing.....	70.55	29.45	15.73	4.97	27.12	2.33
Women's clothing.....	68.77	31.23	16.57	7.08	29.23	2.00
Family shoe.....	68.51	31.49	16.98	6.54	29.00	2.49
Hardware.....	73.03	26.97	15.70	4.14	24.97	2.00
Furniture.....	71.83	28.17	13.99	4.59	26.63	1.54
Household appliance, radio and television.....	73.65	26.35	13.98	3.70	24.61	1.74
Fuel dealers.....	77.65	22.35	6.12	2.16	20.35	2.00
Drug.....	67.86	32.14	18.53	5.16	28.50	3.64
Jewellery.....	56.48	43.52	22.92	8.25	40.38	3.14

¹ Excludes delivery and, for unincorporated stores, also excludes proprietors' salaries. ² Includes taxes and insurance, light, heat and power, repairs, maintenance, depreciation (except on delivery equipment) and rentals on rented premises. ³ Includes salaries and wages and occupancy expenses. ⁴ Includes, for unincorporated stores, proprietors' salaries or withdrawals.

Motor Vehicle Sales.—There were 407,710 new passenger cars sold in 1956, an all-time record. Sales of trucks and buses recovered from a drop in 1954 but did not pass the 1950-53 level in number of units sold. Dollar sales were at record levels in both categories in 1956.

9.—Retail Sales of New Motor Vehicles 1947-56

Year	Passenger Cars		Trucks and Buses		Totals	
	No.	\$	No.	\$	No.	\$
1947.....	159,205	283,190,390	71,050	133,047,105	230,255	416,237,495
1948.....	145,655	282,903,958	75,645	156,313,030	221,300	439,216,988
1949 ¹	202,318	412,297,863	84,023	176,426,822	286,341	588,724,685
1950.....	324,903	661,673,944	104,792	223,995,095	429,695	885,669,039
1951.....	275,686	683,182,846	109,962	266,976,665	385,648	950,159,511
1952.....	292,095	725,167,630	108,682	277,448,211	400,777	1,002,615,841
1953.....	359,172	899,726,000	103,354	262,745,000	462,526	1,162,471,000
1954.....	310,546	797,554,000	72,082	191,964,000	382,628	989,518,000
1955.....	386,962	1,023,351,000	78,716	232,539,000	465,678	1,255,890,000
1956.....	407,710	1,127,523,000	91,660	326,690,000	499,370	1,454,213,000

¹ Newfoundland included from 1949.

Farm Implement Sales.—All regions registered an increase in farm implement and equipment sales in 1956 over 1955. Sales of repair parts, which are not recorded in Tables 10 and 11, amounted to \$28,451,964 in 1955 and \$31,824,672 in 1956—a slight increase in each year over the 1954 figure of \$27,335,796. Sales by province are shown for 1955 and 1956 in Table 10 and by type of equipment in Table 11.

10.—Sales of Farm Implements and Equipment by Province 1955 and 1956

(Values at wholesale prices)

Province or Region	1955		1956		Percentage Change 1955-56
	Amount	P.C. of Total	Amount	P.C. of Total	
	\$		\$		
Newfoundland.....	343,876	0.2	439,871	0.3	+27.9
Maritime Provinces.....	6,485,628	4.2	6,984,186	4.1	+7.7
Quebec.....	21,713,939	14.2	23,325,374	13.6	+7.4
Ontario.....	43,819,906	28.6	42,902,342	25.1	-2.1
Manitoba.....	15,074,611	9.9	18,588,098	10.9	+23.3
Saskatchewan.....	32,435,199	21.2	40,748,641	23.9	+25.6
Alberta.....	28,065,645	18.3	32,686,198	19.1	+16.5
British Columbia.....	5,185,630	3.4	5,092,745	3.0	-1.8
Totals.....	153,124,434	100.0	170,767,455	100.0	+11.5

11.—Farm Implement and Equipment Sales by Major Group 1955 and 1956

(Values at wholesale prices)

Group	Canada			Prairie Provinces			
	1955	1956	P.C. Change 1955-56	1955	1956	P.C. Change 1955-56	P.C. of Canada Total 1956
	\$'000	\$'000		\$'000	\$'000		
Planting, seeding, and fertilizing machinery.....	5,341	6,094	+14.1	1,720	2,213	+28.7	36.3
Ploughs.....	8,225	8,019	-2.5	5,414	5,332	-1.5	66.5
Tilling, cultivating, and weeding machinery.....	7,016	7,071	+0.8	4,004	4,262	+6.4	60.3
Haying machinery.....	19,820	27,245	+37.5	7,748	11,931	+54.0	43.8
Harvesting machinery.....	27,564	34,753	+26.1	21,727	28,528	+31.3	82.1
Machines for preparing crops for market or use.....	4,933	4,768	-3.3	2,792	2,948	+5.6	61.8
Tractors and engines.....	58,760	63,262	+7.7	27,157	31,398	+15.6	49.6
Spraying and dusting equipment.....	1,996	1,770	-11.3	492	550	+11.8	31.1
Farm wagons, trucks and sleighs.....	1,433	1,805	+26.0	396	507	+28.0	28.1
Dairy machinery and equipment.....	3,953	4,787	+21.1	847	1,078	+27.3	22.5
Barn equipment.....	2,671	2,637	-1.3	567	558	-1.6	21.2
Poultry farm equipment.....	631	948	+50.2	134	171	+27.6	18.0
Miscellaneous farm equipment.....	10,781	7,608	-29.4	2,577	2,547	-1.2	33.5
Totals, All Groups.....	153,124	170,767	+11.5	75,575	92,023	+21.8	53.8

Sales Financing.—Financing of retail instalment sales reached a record high in 1956 when it was in excess of \$1,000,000,000. Both consumer and commercial and industrial sectors contributed to the gain. Balances outstanding at the close of the year were also

higher as is shown in Table 12. The figures of motor vehicle sales and financing given in Table 13 show that a greater proportion of vehicles was financed in 1956 than in previous years.

12.—Retail Instalment Paper Purchased and Balances Outstanding by Province and by Class of Goods 1953-56

(Millions of Dollars)

Item	Paper Purchased				Balances Outstanding Dec. 31—			
	1953	1954	1955	1956	1953	1954	1955	1956
Province								
Atlantic Provinces.....	73	67	86	98	53	54	68	81
Quebec.....	195	182	225	298	146	145	187	248
Ontario.....	379	327	404	500	274	258	317	417
Manitoba.....	44	31	34	44	33	27	27	37
Saskatchewan.....	52	36	32	43	40	33	30	35
Alberta.....	119	85	103	138	93	76	89	115
British Columbia ¹	81	66	93	127	58	54	73	102
Totals, Retail Financing.....	943	794	977	1,248	697	647	791	1,035
Class of Goods								
Consumer Goods.....	714	620	759	925	512	483	599	756
New passenger cars.....	252	231	307	409	195	193	264	364
Used passenger cars.....	321	269	297	337	216	195	214	249
Radio and television.....	38	43	59	58	29	35	47	47
Household appliances.....	64	44	58	58	46	36	45	47
Furniture.....	14	11	15	21	10	9	12	17
Other.....	25	22	23	42	16	15	17	32
Commercial and Industrial.....	229	174	218	323	185	164	192	279
New commercial vehicles.....	90	61	73	112	78	63	67	98
Used commercial vehicles.....	63	50	50	52	46	41	39	40
Other.....	76	63	95	159	61	60	86	141

¹ Includes the Yukon and Northwest Territories.

13.—Sales and Financing of New Motor Vehicles (Passenger and Commercial) 1947-56

Year	Motor Vehicles Sold	Motor Vehicles Financed	P.C. of Total Sales Financed		Average Financed Value
			Number	Value	
	No.	No.	p.c.	p.c.	\$
1947.....	230,255	46,700	20.3	15.7	1,401
1948.....	221,300	51,867	23.4	16.8	1,423
1949 ¹	286,341	81,502	28.5	19.6	1,417
1950.....	429,695	135,304	31.5	21.6	1,415
1951.....	385,648	126,255	32.7	20.1	1,514
1952.....	400,777	172,587	43.1	29.2	1,695
1953.....	462,526	189,052	40.9	29.4	1,810
1954.....	382,628	154,104	40.3	29.5	1,897
1955.....	465,678	185,127	39.8	29.9	2,031
1956.....	499,370	224,905	45.0	35.8	2,316

¹ Newfoundland included from 1949.

Retail Consumer Credit.—Credit granted by retail stores forms a large part of the over-all consumer credit total. The total amount owing to retailers at the end of 1956 stood at \$981,500,000, almost double the 1951 figure of \$545,800,000. The rise in credit from 1951 to 1956 held by retailers is evident in Table 14.

14.—Retail Consumer Credit 1951-56 and by Kind of Business 1956

Period and Kind of Business	Sales				Accounts Receivable (at end of period)		
	Cash	Instalment	Charge	Total	Instalment	Charge	Total
	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000
1951r.....	7,167.6	943.6	2,581.6	10,692.8	126.5	419.3	545.8
1952r.....	7,418.4	1,421.5	2,692.2	11,532.1	246.2	451.3	697.5
1953.....	7,808.2	1,585.5	2,734.2	12,127.9	287.8	483.6	771.4
1954.....	7,887.9	1,431.5	2,746.4	12,065.8	326.6	492.7	819.3
1955.....	8,348.3	1,705.6	3,058.0	13,111.9	381.8	542.8	924.6
1956—							
January-March.....	1,870.2	354.3	685.6	2,910.1	365.3	490.4	855.7
April-June.....	2,322.7	545.7	838.5	3,706.9	372.6	535.9	908.5
July-September.....	2,264.2	484.9	841.0	3,590.1	383.4	556.8	940.2
October-December.....	2,557.0	442.7	881.8	3,881.5	414.9	566.6	981.5
Kind of Business							
Department stores.....	771.3	211.6	259.2	1,242.1	161.3	83.1	244.4
Motor vehicle dealers.....	820.1	1,114.1	612.7	2,546.9	22.2	74.5	96.7
Men's clothing stores.....	170.8	6.3	50.2	227.3	1.9	14.2	16.1
Family clothing stores.....	148.6	17.4	45.9	211.9	7.0	14.7	21.7
Women's clothing stores.....	185.1	3.4	54.3	242.8	1.0	11.8	12.8
Hardware stores.....	169.3	9.5	95.3	274.1	4.0	24.0	28.0
Furniture, appliances and radio stores.....	179.2	283.8	113.3	576.3	162.9	26.4	189.3
Jewellery stores.....	78.8	27.9	24.1	130.8	15.0	8.8	23.8
Grocery and combination stores (independent).....	1,183.9	..	357.8	1,541.7	..	35.5	35.5
General stores.....	377.9	..	179.9 ¹	557.8	..	26.8 ¹	26.8
Fuel dealers.....	67.4	3.9	225.6	296.9	2.4	40.2	42.6
Garages and filling stations.....	551.0	..	225.7 ¹	756.7	..	28.9 ¹	28.9
All other trades.....	4,330.7	145.4	1,007.2	5,483.3	36.9	178.0	214.9

¹ Includes instalment.

Subsection 3.—Service Establishments

Service establishments as defined in the Census of Distribution include all those places of business where major source of gross income (annual turnover) was derived from the rendering of services as opposed to the sale of merchandise. The following types of service were covered: amusement and recreation such as motion-picture theatres and bowling alleys; personal services such as laundries and dry-cleaning plants, barber shops and shoe repair shops; certain business services such as advertising agencies and window display services; repair services such as automobile repair, radio repair and watch repair; burial services; photography, commercial and portrait; hotels and tourist camps; and other services such as cold storage locker rentals and taxis.

Summary statistics of the detailed coverage in 1951 are given in the 1955 Year Book at pp. 974-977. Annual data for certain services only are included here.

Theatres.—The receipts of motion-picture theatres increased steadily up to 1953 but decreased continuously since as shown by Table 15. Drive-in theatres, which showed the greatest development among theatres in recent years, appear to have reached their peak in 1955. In 1956 there were 237 drive-ins in operation as compared with 242 in the previous year.

15.—Motion-Picture Theatres and Receipts by Province 1953-56

NOTE.—Figures include, in addition to regular theatres, establishments in which motion-picture entertainment is provided by community organizations such as churches, lodges, Boards of Trade, etc., as well as drive-in theatres. Halls serviced by itinerant operators are not included. Receipts are exclusive of amusement taxes.

Province	1953		1954		1955		1956	
	No.	\$	No.	\$	No.	\$	No.	\$
Newfoundland.....	104	1,321,390	115	1,475,567	128	1,564,753	130	1,278,641
P. E. Island.....	16	359,162	22	427,680	21	446,187	17	329,699
Nova Scotia.....	92	4,364,824	97	4,543,668	99	3,972,238	96	3,252,641
New Brunswick.....	76	2,898,430	79	2,872,828	80	2,616,167	76	2,371,715
Quebec.....	654	25,989,955	639	23,066,057	632	19,987,471	563	19,663,010
Ontario.....	658	42,253,374	645	39,847,466	641	35,983,815	589	34,154,413
Manitoba.....	194	5,610,673	198	5,773,354	201	4,802,826	185	4,035,086
Saskatchewan.....	415	5,711,955	435	6,270,287	423	5,549,273	390	5,034,855
Alberta.....	300	8,810,223	319	9,780,059	324	9,070,426	305	8,168,863
British Columbia ¹	240	11,283,980	264	11,072,915	259	9,826,031	241	9,227,972
Canada.....	2,749	108,603,966	2,813	105,129,881	2,808	93,819,187	2,592	87,516,895

¹ Includes the Yukon and Northwest Territories.

16.—Summary Statistics of Motion-Picture Theatre Operations 1955 and 1956

Item	Regular Theatres	Drive-in Theatres	Community Enterprises	Halls Serviced by Itinerant Operators	Total
1955					
Establishments..... No.	1,950	242	616	590	3,398
Receipts (excluding taxes)..... \$	86,373,652	5,755,158	1,690,377	340,381	94,159,568
Amusement taxes..... \$	10,264,183	601,836	119,967	20,499	11,006,485
Paid admissions..... No.	184,968,467	10,687,887	4,757,223	947,038	201,360,615
1956					
Establishments..... No.	1,849	237	506	394	2,986
Receipts (excluding taxes)..... \$	80,666,267	5,394,296	1,456,332	251,925	87,768,820
Amusement taxes..... \$	8,674,890	519,638	100,745	13,505	9,308,778
Paid admissions..... No.	162,859,006	9,705,982	4,050,779	685,624	177,301,391

Power Laundries, Dry Cleaning and Dyeing Plants.—A record of the value of work performed by power laundries and cleaning and dyeing establishments during the years 1950-56 is given in Table 17, together with other basic data on operation.

17.—Summary Statistics of Power Laundries, Dry Cleaning and Dyeing Plants 1950-56 and by Province 1955 and 1956

Year	Plants	Em- ployees	Salaries and Wages	Cost of Materials	Value of Work Performed
	POWER LAUNDRIES				
	No.	No.	\$	\$	\$
1950.....	323	14,310	20,976,430	4,811,682	40,586,942
1951.....	317	14,079	22,248,517		44,053,442
1952.....	307	13,922	24,496,053	6,143,769	46,852,690
1953.....	310	14,164	25,801,841	6,511,296	49,120,933
1954.....	299	13,754	26,635,646	4,665,671	50,513,242
1955.....	306	13,991	28,078,112	4,994,234	54,199,647
1956.....	308	14,514	30,090,800	5,738,133	58,873,728

**17.—Summary Statistics of Power Laundries, Dry Cleaning and Dyeing Plants 1950-56
and by Province 1955 and 1956—concluded**

Year and Province	Plants	Em- ployees	Salaries and Wages	Cost of Materials	Value of Work Performed
POWER LAUNDRIES—concluded					
1955	No.	No.	\$	\$	\$
Newfoundland and Prince Edward Island.....	5	93	128,092	26,068	245,551
Nova Scotia.....	15	459	730,678	158,375	1,468,967
New Brunswick.....	13	427	671,547	153,160	1,325,772
Quebec.....	78	4,506	8,621,306	1,541,720	16,551,039
Ontario.....	110	4,690	9,367,094	1,575,379	17,951,040
Manitoba.....	8	524	1,015,307	190,723	1,896,566
Saskatchewan.....	10	306	686,736	146,856	1,332,320
Alberta.....	23	917	1,885,089	393,330	3,658,473
British Columbia, Yukon and N.W.T.....	44	2,069	4,972,263	808,623	9,769,919
Canada, 1955.....	306	13,991	28,078,112	4,994,234	54,199,647
1956					
Newfoundland and Prince Edward Island.....	5	108	162,351	32,401	366,610
Nova Scotia.....	14	471	770,239	167,520	1,595,386
New Brunswick.....	13	419	666,646	157,702	1,339,979
Quebec.....	79	4,623	9,245,679	1,753,315	17,826,785
Ontario.....	114	4,909	10,114,492	1,815,185	19,847,552
Manitoba.....	7	538	1,005,244	197,124	1,966,308
Saskatchewan.....	9	311	672,326	153,807	1,328,742
Alberta.....	23	921	1,934,873	404,132	3,888,583
British Columbia, Yukon and N.W.T.....	44	2,214	5,518,950	1,056,947	10,713,783
Canada, 1956.....	308	14,514	30,090,800	5,738,133	58,873,728
DRY CLEANING AND DYEING PLANTS					
	No.	No.	\$	\$	\$
1950.....	919	13,450	21,704,698	5,378,564	46,249,622
1951.....	981	13,933	23,850,119	..	52,798,415
1952.....	991	14,816	27,148,924	6,710,355	58,478,449
1953.....	1,029	15,234	29,898,356	7,255,050	64,029,307
1954.....	1,107	15,485	31,512,711	7,535,432	67,222,831
1955.....	1,205	15,909	32,873,802	7,930,290	70,733,946
1956.....	1,338	16,939	35,620,930	9,157,172	78,527,203
1955					
Newfoundland and Prince Edward Island.....	17	269	529,659	129,102	1,179,804
Nova Scotia.....	45	576	1,030,815	246,501	2,241,177
New Brunswick.....	33	340	532,733	154,207	1,366,602
Quebec.....	217	3,479	7,105,324	1,667,961	15,254,551
Ontario.....	521	6,913	14,413,726	3,492,541	30,974,922
Manitoba.....	53	1,187	2,704,898	613,132	5,087,697
Saskatchewan.....	84	653	1,406,773	344,771	3,275,254
Alberta.....	117	1,247	2,442,271	628,769	5,441,888
British Columbia, Yukon and N.W.T.....	118	1,245	2,707,603	653,306	5,912,951
Canada, 1955.....	1,205	15,909	32,873,802	7,930,290	70,733,946
1956					
Newfoundland and Prince Edward Island.....	18	260	554,782	137,468	1,235,653
Nova Scotia.....	48	597	1,118,485	290,588	2,307,542
New Brunswick.....	36	388	630,298	195,189	1,570,530
Quebec.....	252	3,764	7,831,274	1,995,942	16,801,189
Ontario.....	581	7,304	15,666,948	3,941,504	34,726,276
Manitoba.....	59	1,316	2,588,842	774,639	5,640,114
Saskatchewan.....	90	678	1,393,784	366,996	3,377,059
Alberta.....	128	1,320	2,890,999	712,582	6,388,122
British Columbia, Yukon and N.W.T.....	126	1,312	2,945,518	742,174	6,480,724
Canada, 1956.....	1,338	16,939	35,620,930	9,157,172	78,527,203

Advertising Agencies.—Table 18 records the growth of business done by advertising agencies during 1956 as compared with the four previous years.

18.—Summary Statistics of Advertising Agencies 1952-56

Item	1952	1953	1954	1955	1956
Billings..... \$	121,666,983	144,339,308	156,163,289	177,240,355	204,580,522
Commissionable billings..... \$	120,628,837	142,957,916	154,467,028	174,924,772	201,797,434
Other..... \$	1,038,156	1,381,392	1,696,261	2,315,583	2,783,088
Gross revenue..... \$	19,060,261	22,591,718	24,579,169	27,689,654	32,203,754
Distribution of Billings—					
Publications..... p.c.	59.9	59.1	56.4	53.3	52.6
Other visual..... p.c.	4.5	4.2	4.5	5.5	4.4
Production, artwork, etc..... p.c.	17.1	17.4	17.3	15.1	15.3
Radio..... p.c.	17.6	18.7	15.4	11.9	10.3
Television..... p.c.			5.5	13.5	16.6
Other..... p.c.	0.9	0.6	0.9	0.7	0.8

Hotels.—In 1956 there were 5,067 hotels in operation in Canada, 4,148 of them full-year hotels and 919 seasonal hotels. Table 19 shows the provincial distribution of these establishments, together with the sources of their revenue.

19.—Hotels and their Receipts by Source 1950-56 and by Province 1955 and 1956

Year and Province	Hotels	Rooms	Receipts				
			Rooms	Meals	Beer, Wine and Liquor	All Other Sources	Total
	No.	No.	\$'000	\$'000	\$'000	\$'000	\$'000
1950.....	5,169	146,353	75,842	58,586	162,815	25,147	322,390
1951.....	5,092	146,441	83,322	63,440	180,642	29,878	357,282
1952.....	5,157	140,615	89,879	67,269	201,759	33,029	391,936
1953.....	5,209	149,653	93,914	70,974	209,984	35,843	410,715
1954.....	5,208	148,890	94,094	70,829	204,555	36,378	405,856
1955.....	5,081	147,812	96,273	72,236	211,415	35,385	415,309
1956.....	5,067	149,625	104,453	78,169	223,398	35,811	441,831
1955							
Newfoundland.....	29	801	856	627	710	197	2,390
Prince Edward Island.....	25	717	334	296	—	57	687
Nova Scotia.....	133	3,665	2,895	2,438	389	622	6,344
New Brunswick.....	96	3,189	2,175	1,325	—	509	4,009
Quebec.....	1,505	39,801	24,045	18,994	51,072	8,007	102,118
Ontario.....	1,495	45,881	31,415	28,295	62,698	12,151	134,559
Manitoba.....	287	8,006	4,672	2,523	19,171	2,026	28,392
Saskatchewan.....	523	11,780	5,728	3,595	23,586	2,582	35,491
Alberta.....	450	14,764	10,911	6,531	28,172	4,704	50,318
British Columbia ¹	538	19,208	13,242	7,612	25,617	4,530	51,001
Canada, 1955.....	5,081	147,812	96,273	72,236	211,415	35,385	415,309
1956							
Newfoundland.....	28	798	938	684	746	205	2,573
Prince Edward Island.....	24	677	357	292	—	51	700
Nova Scotia.....	129	3,705	3,073	2,638	286	572	6,569
New Brunswick.....	96	3,152	2,310	1,395	—	571	4,276
Quebec.....	1,500	40,293	26,166	20,111	55,529	7,651	109,457
Ontario.....	1,496	46,584	33,934	30,289	64,843	12,231	141,297
Manitoba.....	287	8,012	4,832	3,058	19,048	2,040	28,978
Saskatchewan.....	518	11,698	5,983	3,632	24,094	2,703	36,412
Alberta.....	449	14,921	11,598	6,977	28,553	4,768	51,896
British Columbia ¹	540	19,785	15,262	9,093	30,299	5,019	59,673
Canada, 1956.....	5,067	149,625	104,453	78,169	223,398	35,811	441,831

¹ Includes the Yukon and Northwest Territories.

Section 2.—The Marketing of Agricultural Products

A special article covering the general movement of farm-produced foods from producer to consumer, with the exception of the grain trade and livestock, appears in the 1956 Year Book, pp. 917-922. Grain and livestock marketings are dealt with in detail in Subsections 1 and 2 following.

Subsection 1.—Grain Trade

Marketing Problems and Policies, 1955-56

In 1955-56 production, marketings and exports of the five major Canadian grains combined were above the 1954-55 levels. Although the spring season was late, good weather conditions prevailed during most of the growing and harvesting periods and above-average yields were obtained for most crops. The higher level of production in 1955 was sufficient to offset by a considerable margin the decline that occurred in July-end carryover stocks. Marketings of wheat, oats and barley continued under the compulsory crop-year pools system of the Canadian Wheat Board. All grains in Eastern Canada and rye and flaxseed in Western Canada continued to be traded on the open market.

On July 19, 1955, the Canadian Wheat Board announced the delivery quota policy for the 1955-56 crop year. As in the preceding year, an initial quota of 100 units was to be effective at local delivery stations as announced (one unit being equivalent to three bushels of wheat, or five bushels of barley or rye, or eight bushels of oats). The initial quota was followed by general delivery quotas, based upon bushels per specified acre, the specified acreage consisting of the producer's acreage seeded to wheat (other than Durum), oats, barley and rye plus his acreage in summerfallow in 1955. Deliveries of Durum wheat and flaxseed were not subject to quota control. However, by July 31, 1955, some producers had not completed their deliveries under the final eight-bushel general quota established for the crop year 1954-55, and the Board extended this quota but with deliveries for the account of the 1955-56 pool. Eight-bushel general quotas at individual stations expired and initial delivery quotas for 1955-56 were established only after the Board was reasonably certain that deliveries under the eight-bushel general quota had been largely completed. By Sept. 2, initial unit quotas had been established at all delivery points. By the end of the crop year, delivery quotas varied between five bushels and eight bushels per specified acre.

Preliminary data indicate that total marketings of the five major grains in Western Canada in 1955-56 amounted to about 567,300,000 bu., representing an increase of 8 p.c. over the comparable 1954-55 total of 524,600,000 bu. and 2 p.c. over the ten-year (1945-46—1954-55) average of 556,300,000 bu. Combined exports of the same grains, including wheat flour, rolled oats and oatmeal, malt and pot and pearl barley in grain equivalent, amounted to 406,500,000 bu., exceeding both the 1954-55 total of 370,700,000 bu. and the ten-year (1946-55) average of 369,900,000 bu. Carryover stocks of the five major Canadian grains in all positions at July 31, 1956, were estimated at 827,400,000 bu., about 13 p.c. above the 1955 figure of 731,900,000 bu. and more than double the ten-year average of 399,600,000 bu.

20.—Supply and Disposition of Canadian Grain, Crop Years Ended July 31, 1955 and 1956

NOTE.—Data for wheat include final revisions based on the 1956 Census but data for other crops are subject to change pending completion of intercensal revisions.

(Millions of bushels)

Item	Wheat	Oats	Barley	Rye	Flaxseed
Crop Year 1954-55					
Carryover, Aug. 1, 1954.....	618.7	125.8	145.9	19.3	2.6
Production in 1954.....	332.0	306.8	175.5	14.2	11.2
Imports ¹	0.2	2	2	2	2
Totals, Supply.....	950.8	432.6	321.4	33.5	13.8

For footnotes, see end of table.

20.—Supply and Disposition of Canadian Grain, Crop Years Ended July 31, 1955 and 1956
—concluded

Item	Wheat	Oats	Barley	Rye	Flaxseed
Crop Year 1954-55—concluded					
Exports ¹	251.9	22.2	80.9	9.3	6.3
Domestic use ²	162.2	326.4	149.1	5.7	6.2
Totals, Disposition	414.1	348.6	229.9	15.0	12.6
Crop Year 1955-56					
Carryover, July 31, 1955.....	536.7	84.0	91.5	18.5	1.2
Production in 1955.....	519.2	407.8	252.4	14.8	19.7
Imports ¹	2	2	2	2	1.1
Totals, Supply	1,056.0	491.8	343.9	33.2	22.0
Exports ¹	309.2	4.1	68.7	12.9	11.6
Domestic use ²	167.2	368.5	164.2	5.0	8.0
Totals, Disposition	476.4	372.7	232.9	17.9	19.5
Carryover, July 31, 1956.....	579.6	119.1	110.9	15.3	2.5

¹ Import and export data for wheat, oats, barley and rye, respectively, include flour in terms of wheat, rolled oats in terms of oats, malt and pot and pearl barley in terms of barley, and rye flour in terms of rye. ² Less than 50,000 bu. ³ Includes human food, seed requirements, industrial use, loss in handling and animal feed.

Wheat.—Supply and Disposition.—Stocks of wheat on hand at the beginning of the 1955-56 crop year were about 13 p.c. below those of the preceding year and represented a decline for the first time in seven years. Total crop-year supplies, consisting of carryover stocks plus 1955 production and imports, reached the unprecedented level of 1,056,000,000 bu. Carryover stocks at the end of the 1955-56 crop year were about 8 p.c. higher than at the end of the previous crop year but still lower than the record carryover of July 31, 1954.

21.—Production, Imports, Exports and Domestic Use of Wheat, Crop Years Ended July 31, 1950-56

NOTE.—Includes final revisions based on the 1956 Census.

(Millions of bushels)

Item	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55 ^p	1955-56 ^p
Carryover, Aug. 1.....	102.4	112.2	189.2	217.2	383.2	618.7	536.7
Production.....	366.0	466.5	553.6	701.9	634.0	332.0	519.2
Imports ¹	2	2	2	2	0.5	0.2	2
Totals, Supply	468.4	578.7	742.9	919.1	1,017.6	950.8	1,056.0
Exports ¹	225.1	241.0	355.8	385.5	255.1	251.9	309.2
Domestic use.....	131.1	148.5	169.9	150.4	143.9	162.2	167.2
Totals, Disposition	356.2	389.5	525.7	535.9	399.0	414.1	476.4
Carryover, July 31.....	112.2	189.2	217.2	383.2	618.7	536.7	579.6

¹ Includes wheat flour in terms of wheat.

² Less than 50,000 bu.

Price and Marketing Arrangements.—The marketing of Western Canada wheat during the 1955-56 crop year was again conducted by the Canadian Wheat Board on a one-year pool basis, with the initial payment set at \$1.40 per bu., basis in store Fort William-Port Arthur or Vancouver. The initial payment for No. 1 C.W. Amber Durum was continued at \$1.50 per bu. An interim payment (announced Feb. 2, 1956) amounting to a total of about \$22,300,000 was paid in varying amounts per bushel on the higher grades delivered in 1954-55. Final payment (announced May 18, 1956) on the 318,439,061 bu. of wheat delivered to the 1954-55 pool averaged 12.461 cents per bu. with the total payment for No. 1 Northern, basis in store Fort William-Port Arthur or Vancouver, and prior to deduction of the Prairie Farm Assistance Act levy amounting to \$1.65066 per bu. No adjustment payments on 1955-56 deliveries were made during the crop year but on Jan. 30, 1957, an interim payment on the 1955-56 pool account for wheat was announced, amounting to 10 cents per bu. for all grades except milling grades of Durum for which the interim payment was 25 cents. The full amount of this payment was about \$37,300,000. The final payment on the 1955-56 pool was announced on May 15, 1957, and averaged 11.912 cents per bu. on farmers' deliveries of 352,200,000 bu. Prior to deduction of the Prairie Farm Assistance Act levy, the net price realized by producers in the 1955-56 pool for No. 1 Northern Wheat, basis in store Fort William-Port Arthur or Vancouver, was \$1.60893 per bu.

The crop year 1955-56 coincided with the third and final year of the second International Wheat Agreement. Under its provisions, Canada had a guaranteed export quota of 153,100,000 bu. for 1955-56 and, according to the report on the year's transactions, Canadian sales under the Agreement totalled 75,600,000 bu. These sales continued to be quite widely distributed; 26 of the 44 importing countries included in the pact purchased wheat and/or flour from Canada. The larger purchasers were the Federal Republic of Germany, 17,600,000 bu.; Japan, 15,900,000 bu.; Belgium, 7,500,000 bu.; Switzerland, 5,500,000 bu.; and the Union of South Africa, 5,000,000 bu. The greater part of Canada's wheat trade in 1955-56 was carried on in Class II wheat (wheat exported outside the provisions of the International Wheat Agreement). The United Kingdom continued as the leading importer of Class II wheat, shipments to that country accounting for 96,800,000 bu. of wheat as grain and the equivalent of an additional 12,700,000 bu. in the form of wheat flour. The combined Canadian exports of 309,200,000 bu. of wheat and flour went to 87 countries, territories and colonies during the crop year.

During most of 1955-56, domestic sales of all classes of wheat were made at the same prices as those prevailing for wheat sold under the International Wheat Agreement. From Aug. 1 to Sept. 6, 1955, an additional 10 cents per bu. over the IWA price was charged on domestic sales of Durum. During the entire 1955-56 crop year, Class II prices for all grades of wheat, except Durum, coincided with the IWA and domestic quotations. The average Class II price received for No. 1 C.W. Amber Durum during the crop year was 59½ cents per bu. above the comparable IWA average price of 203½ cents.

Exports of wheat and flour (in terms of wheat) during 1955-56 amounted to 309,200,000 bu., exceeding by 23 p.c. the 251,900,000 bu. exported in 1954-55. The 1955-56 total exports consisted of 269,200,000 bu. of wheat as grain and the equivalent of 40,000,000 bu. of wheat flour. Total domestic (commercial and farm) disappearance of wheat in 1955-56 amounted to 167,200,000 bu. surpassing both the 1954-55 figure of 162,200,000 bu. and the ten-year (1945-46—1954-55) average of 150,100,000 bu. The carryover at July 31, 1956, amounted to 579,600,000 bu. with a larger crop in 1955 more than offsetting the combined effect of a reduced carryover at July 31, 1955, and higher levels of both exports and domestic disappearance.

Other Grains.—Supply and Disposition.—Preliminary data on supply and disposition of the major Canadian grains for the crop year 1955-56 together with revised data for 1954-55 are set out in Table 20. Although July 31, 1955, carryover stocks of each of the five grains—wheat, oats, barley, rye and flaxseed—were below the comparable 1954 levels, production of these grains in 1955, with the exception of rye, was sufficiently large to bring the total supply of each of the grains in 1955-56 above 1954-55 crop-year level.

Reflecting decreases in exports of both oats and barley, the combined export movement of oats, barley, rye and flaxseed, plus the grain equivalent of certain products, amounted to 97,300,000 bu., representing a decrease of 18 p.c. from the 1954-55 level of 118,800,000 bu. Exports of oats, including rolled oats and oatmeal, dropped sharply for the second successive year—from 70,700,000 bu. in 1953-54 to 22,200,000 bu. in 1954-55 and 4,100,000 bu. in 1955-56. The 68,700,000 bu. of barley and its products exported in 1955-56 was 15 p.c. below the 1954-55 level but was still the fifth largest amount on record. Rye exports at 12,900,000 bu. were above the 9,300,000 bu. exported in 1954-55. Exports of flaxseed amounted to 11,600,000 bu. and exceeded by 83 p.c. the 1954-55 figure of 6,300,000 bu.

Despite increased domestic disappearance of both oats and barley, the larger available supplies of these two grains, coupled with smaller exports, resulted in July-end carryovers exceeding their respective 1955 totals. With available supplies of rye showing relatively little change and domestic disappearance only fractionally decreased, the higher level of exports resulted in a 17-p.c. drop in the July 31, 1956, carryover of this grain. Although both exports and domestic use of flaxseed increased during the 1955-56 crop year, the effect of substantially greater supplies was sufficient to cause July-end stocks to be more than double those of the preceding year.

Price and Marketing Arrangements.—The Marketing of Western Canada oats and barley was again carried on through compulsory crop-year pools administered by the Canadian Wheat Board. Initial payments for both these grains were the same as in 1954-55, *i.e.*, on the basis of 65 cents per bu. for No. 2 C.W. oats and 96 cents per bu. for No. 3 C.W. Six-Row barley, in store Fort William-Port Arthur. No interim or adjustment payments were made on either grain during the crop year but final payments for both were announced in November 1956. Final payment on the 113,866,728 bu. of barley delivered to the 1955-56 pool averaged 13.362 cents per bu. after deduction of payment expenses and the 1-p.c. Prairie Farm Assistance Act levy. Total prices (basis in store Fort William-Port Arthur) realized by producers for representative grades after deducting carrying charges in country and terminal elevators, Board administrative costs, etc., but before deducting the 1-p.c. PFAA levy, were \$1.08848 per bu. for No. 3 C.W. Six-Row barley and \$0.99324 for No. 1 Feed barley. Final payment on the 71,387,016 bu. of oats delivered to the 1955-56 pool averaged 11.444 cents per bu. Total prices realized by producers for representative grades, on the same basis as for barley, were \$0.79846 for No. 2 C.W. and \$0.71441 for No. 1 Feed oats.

Preliminary data indicate that some 12,500,000 bu. of rye and 15,800,000 bu. of flaxseed were delivered by farmers in Western Canada in 1955-56, both of these grains being sold on the open market. In Eastern Canada, where commercial grain production is on a much smaller scale, all grain continued to be sold on the open market.

Miscellaneous Grain Trade Statistics

Grain Handled at Eastern Elevators.—The volume of grain handled at eastern elevators in the 1955-56 crop year was somewhat higher than in the preceding year. Total receipts of the five grains amounted to 488,852,575 bu., 2 p.c. greater than in 1954-55, while total shipments, at 502,749,758, were 5 p.c. higher. The major part of the increase was accounted for by larger quantities of wheat handled, although rye and flaxseed also contributed. Declines occurred in receipts and shipments of oats and barley.

22.—Canadian Grain Handled at Eastern Elevators, Crop Years Ended July 31, 1952-56

NOTE.—Figures for the crop years ended 1922-51 are given in the corresponding table of previous Year Books beginning with the 1931 edition.

Item and Crop Year	Wheat	Oats	Barley	Rye	Flaxseed	Total Grain
	bu.	bu.	bu.	bu.	bu.	bu.
Receipts—						
1951-52.....	380,847,530	43,117,243	113,942,213	7,803,517	6,913,172	552,623,675
1952-53.....	438,086,442	49,827,694	157,847,406	8,078,375	11,211,224	665,051,141
1953-54.....	229,955,136	41,756,777	84,232,908	1,325,338	10,431,224	367,701,383
1954-55.....	293,901,551	48,141,076	111,800,738	14,346,219	12,975,483	481,165,067
1955-56.....	333,237,962	43,029,962	72,647,433	18,472,661	21,464,557	488,852,575
Shipments—						
1951-52.....	358,201,436	42,983,657	109,327,850	7,644,936	6,642,468	524,800,347
1952-53.....	427,422,896	49,870,352	162,834,639	7,255,950	11,141,489	658,525,326
1953-54.....	211,822,877	42,825,733	86,875,792	1,944,955	10,712,103	354,181,460
1954-55.....	292,069,170	46,730,624	111,432,900	14,239,919	13,047,259	477,519,872
1955-56.....	350,307,242	41,909,092	70,485,188	18,632,238	21,415,998	502,749,758

Grain Inspections.—The volume of wheat, oats, barley, rye, flaxseed, buckwheat, corn and mixed grain inspected by the Board of Grain Commissioners for Canada in the crop year 1954-55 amounted to 538,608,308 bu., 11 p.c. below the 1953-54 total of 602,095,068 bu.; in the 1955-56 crop the volume increased by about 4 p.c. to a level of 560,568,263 bu. Quantities of the various grains inspected at eastern and western points, as well as inspections of peas, soybeans, beans, rapeseed, mustard seed and screenings, appear in Table 23.

23.—Quantities of Grain and Other Field Crops Inspected, Crop Years Ended July 31, 1955 and 1956

Crop	1954-55			1955-56		
	Western Division	Eastern Division	Total	Western Division	Eastern Division	Total
	bu.	bu.	bu.	bu.	bu.	bu.
Wheat.....	310,657,883	6,512,287	317,170,170	341,137,953	3,185,962	344,323,915
Spring wheat.....	309,207,038	10,647	309,217,685	339,089,733	6,000	339,095,733
Winter wheat.....	1,450,845	6,501,640	7,952,485	2,048,220	3,179,962	5,228,182
Oats.....	71,262,239	55,233	71,317,472	55,038,770	43,458	55,082,228
Barley.....	113,625,546	1,156,627	114,782,173	112,480,614	416,640	112,897,254
Rye.....	13,498,552	58,200	13,556,752	12,380,049	70,870	12,450,919
Flaxseed.....	10,045,758	20,000	10,065,758	18,194,329	22,500	18,216,829
Buckwheat.....	296,262	119,931	416,193	274,486	20,702	295,188
Corn.....	736,238	9,796,261	10,532,499	452,620	16,360,074	16,812,694
Mixed grain.....	755,264	12,027	767,291	480,411	8,825	489,236
	cars			cars		
Peas.....	162	—	..	57	—	..
Soybeans.....	1	4,157,512	..	—	5,776,444	5,776,444
Beans.....	—	241,375	241,375	—	378,238	378,238
Rapeseed.....	173	—	..	642	—	1,193,478
Mustard seed.....	—	—	..	18	—	..
Screenings.....	328	—	..	322	—	..

Lake Shipments of Grain.—The 1955 navigation season opened officially on Apr. 20 and closed on Dec. 15. During that season, total vessel shipments of wheat, oats, barley, rye, flaxseed and buckwheat amounted to 262,551,436 bu., somewhat below the 1954 total of 292,829,921 bu. During the 1956 season of navigation, which opened on Apr. 11 and closed on Dec. 17, 367,167,969 bu. of grain were shipped by lake vessel.

**24.—Lake Shipments of Canadian Grain from Fort William-Port Arthur,
Season of Navigation 1955 and 1956**

Grain	1955			1956		
	To Canadian Ports	To U.S. Ports	Total Shipments ¹	To Canadian Ports	To U.S. Ports	Total Shipments ¹
Wheat..... bu.	137,390,474	4,209,401	141,599,875	199,428,841	6,687,997	206,135,505
Oats..... "	31,110,355	791,761	31,902,116	42,424,872	5,091,915	47,516,787
Barley..... "	48,088,680	19,816,337	67,905,017	62,065,011	29,878,371	91,990,410
Rye..... "	8,259,433	2,825,230	11,084,663	7,693,781	3,376,703	11,070,484
Flaxseed..... "	9,969,627	—	9,969,627	10,263,835	28,231	10,292,066
Buckwheat..... "	90,138	—	90,138	121,313	41,404	162,717
Totals..... bu.	234,908,707	27,642,729	262,551,436	321,997,653	45,104,621	367,167,969
Sample grain..... lb.	5,506,150	—	5,506,150	9,036,051	952,150	9,988,201
Screenings..... tons	34,924	47,027	81,951	56,752	52,135	108,887

¹ Includes following shipments direct to Europe: barley 158,337 bu. in 1955; wheat 18,667 bu. and barley 47,028 bu. in 1956.

Wheat Flour.—After reaching a peak of 56,033,000 cwt. in 1946-47, Canadian wheat flour production dropped to a postwar low of 39,708,000 cwt. on 1949-50. Production in each of the following three crop years was only slightly below the five-year (1945-46—1949-50) average of 47,012,000 cwt. A rather sharp drop occurred in 1953-54, however, and further slight declines occurred in both 1954-55 and 1955-56 when production amounted to 40,607,000 cwt. and 40,149,000 cwt., respectively. During the crop year 1955-56, 73.7 p.c. of milling capacity was utilized compared with 71.7 p.c. in 1954-55.

Exports of wheat flour during recent years have followed approximately the same pattern as production, dropping from the 1946-47 peak of 33,117,000 cwt. to 17,391,000 cwt. in 1955-56. The 1955-56 exports of wheat flour amounted to approximately 43.3 p.c. of production, about the same as in 1954-55 but a slightly smaller proportion than was exported during the preceding few crop years.

25.—Wheat Milled for Flour, and Production and Exports of Wheat Flour, Five-Year Averages 1936-50 and Crop Years Ended July 31, 1951-56

Crop Year (Aug. 1-July 31)	Wheat Milled for Flour	Wheat Flour Production	Wheat Flour Exports	
			Amount	P.C. of Production
	'000 bu.	cwt.	cwt.	
Av. 1935-36 — 1939-40.....	67,845	29,405,451	9,603,941	32.7
Av. 1940-41 — 1944-45.....	99,705	43,908,245	23,699,546	54.0
Av. 1945-46 — 1949-50.....	107,330	47,011,540	25,819,721	54.9
1950-51.....	106,748	46,315,153	24,356,912	52.6
1951-52.....	104,494	44,771,184	22,258,324	49.7
1952-53.....	106,727	46,776,625	24,609,199	52.6
1953-54.....	91,855	40,769,909	20,142,824	49.4
1954-55.....	92,407	40,606,599	17,692,945	43.6
1955-56.....	91,770	40,148,750	17,391,300	43.3

Subsection 2.—Livestock Marketings*

Commercial marketings of livestock were greater in 1956 than in 1955. Increases in total movement through recorded commercial channels amounted to 8.7 p.c. in cattle, 7.0 p.c. in calves, 0.4 p.c. in sheep and lambs, and 0.7 p.c. in hogs. Slaughter classes of

* For more detailed information, see DBS annual report *Live Stock and Animal Products Statistics*, and the Department of Agriculture publication *Livestock Market Review*. Statistics of livestock and poultry are given at pp. 430-432 and 438-439, respectively, of this volume.

steers sold at stockyards and packing plants increased 12 p.c. over 1955 to a record 783,138. Sales of the heavier grades (over 1,000 lb.) increased 14 p.c. and sales of steers up to 1,000 lb. increased nearly 10 p.c. Heifer gradings increased 10.6 p.c. and cows increased 11.0 p.c. over the previous year. Fed calves decreased 2.5 p.c. Steers constituted the same proportion (35.1 p.c.) of slaughter cattle in 1956 as in 1955. In 1956 shipments of feeder cattle and calves from yards and plants, and on through-billing to Canadian country points outside the province of origin totalled 436,489 head, an increase of 25 p.c. over 1955. There was little change in the proportion of hogs graded into each category. Grade A hogs made up 28.5 p.c. of gradings in 1956 compared to 27.1 p.c. in 1955, while Grade B hogs constituted 50.6 p.c. against 51.9 p.c. in 1955. Grade C hogs, at 9.7 p.c. of total gradings, compared with 9.6 p.c. in 1955, and Grade D remained at 0.5 p.c. All provinces except Manitoba indicated improved quality as measured by the proportion classified as Grade A. The Maritimes again led the provinces in the percentage of A gradings and also in the increase of A gradings in 1956. The price spread between Grades A and B1 hogs remained at \$1 throughout 1955 and 1956. There was little change in the number of sheep and lambs marketed—554,808 in 1956 and 555,694 in 1955. About 59 p.c. of the lambs graded alive in 1956 were "Good", as compared to 61 p.c. in 1955.

26.—Livestock Marketed at Stockyards and Packing Plants by Grade 1952-56

(Exclusive of Newfoundland)

Livestock	1952	1953	1954	1955	1956
	No.	No.	No.	No.	No.
Cattle	1,405,870	1,701,004	1,938,672	1,992,818	2,235,443
Steers up to 1,000 lb.—					
Choice.....	27,012	37,346	55,973	66,813	82,296
Good.....	66,723	86,060	98,113	104,700	107,334
Medium.....	86,047	110,907	132,724	122,454	126,516
Common.....	60,879	85,947	90,091	60,360	73,081
Steers over 1,000 lb.—					
Choice.....	106,978	114,746	125,477	143,539	152,219
Good.....	107,913	125,963	112,467	120,835	143,027
Medium.....	65,871	77,202	75,453	67,835	82,022
Common.....	18,269	27,705	22,583	13,021	16,643
Heifers—					
Choice.....	14,757	14,253	16,261	25,666	28,773
Good.....	60,857	64,803	75,071	78,030	76,949
Medium.....	79,349	86,845	107,370	113,593	124,069
Common.....	54,723	70,153	82,146	74,210	92,552
Fed calves.....	99,389	146,323	172,810	174,017	169,635
Cows.....	339,878	386,785	474,775	526,290	584,402
Bulls.....	73,642	83,220	77,566	73,865	73,846
Stocker and feeder steers.....	112,273	143,828	177,857	193,067	240,552
Stock cows and heifers.....	27,164	34,341	38,695	34,174	61,281
Milkers and springers.....	4,146	4,577	3,240	349	246
Calves	630,621	819,921	899,887	906,623	963,191
Veal—					
Good and choice.....	173,117	232,820	233,671	275,547	244,774
Common and medium.....	357,857	446,111	534,717	486,092	558,063
Grass.....	50,448	72,973	59,005	76,508	87,726
Stocker.....	49,202	68,017	72,494	68,476	72,628
Hog Carcasses	6,698,642	5,002,814	5,078,715	5,916,584	5,959,605
"A".....	1,909,691	1,363,720	1,317,890	1,603,070	1,696,209
"B".....	3,464,597	2,673,573	2,723,127	3,071,901	3,018,166
"C".....	435,004	392,410	463,415	568,724	577,766
"D".....	29,803	23,180	21,663	28,899	30,897
Heavies.....	158,456	115,817	112,812	115,895	108,720
Extra heavies.....	133,552	92,469	88,425	81,039	85,451
Lights.....	163,014	87,550	71,667	117,854	123,008
Sows.....	345,635	207,171	234,189	274,672	266,091
Injured, ridglings and stags.....	58,890	46,924	45,527	51,530	53,297

26.—Livestock Marketed at Stockyards and Packing Plants by Grade 1952-56—concluded

Livestock	1952	1953	1954	1955	1956
	No.	No.	No.	No.	No.
Lambs and Sheep Graded Alive.....	505,878	520,019	539,627	555,694	554,808
Lambs—					
Good.....	300,398	306,397	323,752	340,786	328,261
Common.....	75,423	95,629	103,137	108,440	109,926
Bucks.....	64,375	62,336	51,726	43,138	49,178
Feeders.....	11,696	10,496	16,002	18,160	21,938
Sheep—					
Good.....	28,965	23,364	22,474	23,510	23,014
Common.....	25,021	21,797	22,536	21,660	22,491
Lamb and Sheep Carcasses.....	25,561	28,441	32,937	40,337	49,688
Lambs—					
"A".....	9,553	13,502	14,998	16,055	17,616
"B".....	6,033	6,268	7,284	10,345	13,050
"C".....	4,671	3,971	5,147	6,724	10,281
"D".....	2,156	1,457	1,885	2,354	2,621
"E".....	617	249	483	503	705
Sheep.....	2,531	2,994	3,140	4,356	5,415

27.—Livestock Marketed at Public Stockyards, Packing Plants and Direct for Export by Province 1955 and 1956
(Exclusive of Newfoundland)

Year and Livestock	Maritime Provinces	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
1955	No.	No.	No.	No.	No.	No.	No.	No.
Cattle.....	27,351	106,092	707,879	136,127	399,071	584,745	59,060	2,070,325
Totals to stockyards.....	171	51,231	400,838	112,693	281,423	411,594	18,206	1,276,156
Direct to packers.....	25,911	51,327	270,939	72,810	98,812	159,294	37,569	716,662
Direct for export.....	1,254	3,533	36,053	83	442	4,682	2,259	48,306
Country points in other provinces ¹	15	1	49	541	18,394	9,175	1,026	29,201
Calves.....	26,912	306,379	279,017	82,231	96,680	133,821	9,592	934,632
Totals to stockyards.....	7,843	102,510	117,139	36,138	61,664	66,927	2,816	395,037
Direct to packers.....	18,310	203,738	157,918	45,912	21,178	57,963	6,567	511,586
Direct for export.....	759	131	3,960	36	3	59	13	4,961
Country points in other provinces ¹	—	—	—	145	13,835	8,872	196	23,048
Hogs.....	138,348	1,057,236	1,998,742	435,517	562,412	1,691,193	40,810	5,924,258
Totals to stockyards.....	—	117,611	176,667	76,370	108,387	251,996	1,037	732,098
Direct to packers.....	137,593	939,578	1,820,647	359,137	453,972	1,433,891	39,668	5,184,486
Direct for export.....	755	17	1,428	10	53	5,306	105	7,674
Sheep and Lambs.....	39,534	137,305	182,732	36,792	47,014	147,350	25,550	616,277
Totals to stockyards.....	3,290	27,649	63,195	10,522	21,510	44,102	2,147	172,415
Direct to packers.....	36,097	109,656	117,341	26,265	14,653	96,277	23,327	423,616
Direct for export.....	147	—	2,196	5	43	4,833	26	7,250
Country points in other provinces ¹	—	—	—	—	10,808	2,138	50	12,996
Total Inward Movement—²								
Cattle.....	169	1,558	140,886	11,169	26,399	106,905	1,626	288,712
Calves.....	45	381	51,921	1,212	5,694	26,568	663	86,484
Sheep and lambs.....	464	—	16,442	2,441	1,438	13,835	1,722	36,342

For footnotes, see end of table, p. 956.

**27.—Livestock Marketed at Public Stockyards, Packing Plants and Direct for Export
by Province 1955 and 1956—concluded**

Year and Livestock	Maritime Provinces	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Total
	No.	No.	No.	No.	No.	No.	No.	No.
1956								
Cattle	31,109	111,913	743,170	203,350	439,901	712,975	81,805	2,324,223
Totals to stockyards.....	115	57,807	396,206	129,178	313,654	491,200	26,584	1,414,744
Direct to packers.....	30,447	50,865	305,301	74,050	103,594	208,628	47,814	820,699
Direct for export.....	523	3,180	41,584	43	1	164	1,837	47,332
Country points in other provinces ¹	24	61	79	79	22,652	12,983	5,570	41,448
Calves	28,856	322,684	280,924	89,477	104,974	146,259	16,526	989,700
Totals to stockyards.....	4,924	109,888	106,142	43,165	70,495	69,387	4,893	408,894
Direct to packers.....	23,188	212,755	169,837	46,259	21,465	70,035	10,758	554,297
Direct for export.....	744	41	4,945	3	352	80	10	6,175
Country points in other provinces ¹	—	—	—	50	12,662	6,757	865	20,334
Hogs	124,875	1,060,096	2,197,088	387,908	576,806	1,571,929	42,119	5,960,821
Totals to stockyards.....	—	121,173	215,478	79,081	97,043	201,521	1,036	715,332
Direct to packers.....	124,573	938,917	1,980,828	308,827	479,761	1,370,315	41,052	5,244,273
Direct for export.....	302	6	782	—	2	93	31	1,216
Sheep and Lambs	40,777	137,699	181,337	33,195	42,028	158,566	27,348	620,950
Totals to stockyards.....	2,958	26,702	67,049	11,531	20,390	43,740	4,139	176,509
Direct to packers.....	37,735	110,984	111,721	21,647	13,026	109,716	23,158	427,987
Direct for export.....	84	13	2,567	17	45	1,461	51	6,238
Country points in other provinces ¹	—	—	—	—	8,567	3,649	—	12,216
Total Inward Move- ment ²								
Cattle.....	169	1,477	197,590	6,736	32,811	147,374	1,451	387,608
Calves.....	45	239	42,298	758	5,977	32,573	428	82,318
Sheep and lambs.....	599	216	18,823	2,238	1,757	14,955	315	38,903

¹ Livestock billed through stockyards to country points outside province of origin.

² Movement to farms from stockyards and plants on through-billings from country points in one province to country points in another province.

Section 3.—Warehousing and Cold Storage*

Warehousing ranks high among the means by which the utilities of 'place', 'time' and 'possession' are added to the products of industry. Its importance has been emphasized in modern times because of the introduction of cold storage methods in the conservation of perishable foods.

The presentation of warehousing statistics is difficult because it is not an easy matter to define clearly what are to be regarded as stocks in storage. In these days of complicated business relationships and especially since the rise of the department store and chain store as characteristic institutions in the retail merchandising field, it often happens that warehousing is carried on in close relationship with merchandising. However, if the strict economic definition of warehousing is adopted, then this term should be restricted to those facilities that add the utility of 'time' to the 'form' utilities that are the product of the extraction and manufacturing industries. Because the warehouses established in close connection with retail trade are more often than not convenient places for the temporary storage of goods in process of transfer from the manufacturer or wholesaler to the consumer, they are not, in the strict economic sense, services that add the utility of 'time' to commodities already worked up into 'form'. As some clear line must be drawn and because separate statistics of the latter branch of storage are not available, it is considered practicable to interpret warehousing in this way.

* Information supplied by various Divisions of the Departments of Agriculture, Fisheries, Mines and Technical Surveys, and National Revenue and of the Dominion Bureau of Statistics.

The statistics of warehousing are gathered together under this Section. Subsection 1 presents statistics of the licensed storage of grain. Subsection 2 deals with cold storage facilities without which perishable foods such as meats, dairy products, fish and fruits could not be exchanged or distributed on a wide scale; it includes also figures of stocks of food on hand. Subsection 3 deals with the storage of petroleum and its products, and Subsection 4 with public warehouses and customs warehouses. The facilities that specialize in the storage of tobacco and alcoholic liquors are analysed in Subsection 5. These bonded warehouses, as they are called, are under the strict surveillance of Federal Government excise officers, who supervise all movements into and from such places of storage.

Subsection 1.—Licensed Grain Storage

Total grain storage capacity in Canada, licensed under the provisions of the Canada Grain Act by the Board of Grain Commissioners for Canada at Dec. 1, 1955, amounted to 599,325,000 bu., an increase of 18,356,000 bu. over the level at Dec. 1, 1954. Some 14,650,000 bu. of this increase occurred in western country elevators. Licensed grain storage capacity in Canada reached a peak of 603,000,000 bu. at Dec. 1, 1943, but, following the disposal of heavy wartime stocks, declined to 428,000,000 bu. at Dec. 1, 1947. Since that date capacity has increased each year.

In contrast to 1954, grain yields were well above average in 1955 and were sufficient to offset by a considerable margin the decline in carryover stocks as at July 31. With bumper crops being harvested in four of the preceding five years, the pressure on Canada's grain storage and handling facilities remained unrelieved. As a result, farmers' marketings of western grain continued to be governed to a considerable extent by space made available in country elevators as grain moved forward into domestic and export channels. As indicated in Table 28, there was a relatively small variation in the proportion of elevator space occupied at Dec. 1, Mar. 30 and July 31 in the 1955-56 crop year. Information is given in the table for only three dates in the crop year, but weekly data on stocks of grain in various commercial positions may be obtained from the DBS bulletin *Grain Statistics Weekly*.

28.—Licensed Grain Storage Capacity and Grain in Store, Crop Years 1954-55 and 1955-56

NOTE.—Because these figures are exclusive of stocks in transit or in Eastern Canada mills, they are lower than those shown in Table 23, p. 952.

Crop Year and Storage Position	Licensed Storage Capacity	Canadian Grain in Licensed Storage			Proportion of Licensed Storage Capacity Occupied		
	Dec. 1, 1954	Dec. 1, 1954	Mar. 30, 1955	July 31, 1955 ^a	Dec. 1, 1954	Mar. 30, 1955	July 31, 1955 ^a
1954-55	'000 bu.	'000 bu.	'000 bu.	'000 bu.	p.c.	p.c.	p.c.
Western country.....	338,174	247,333	246,479	273,525	73.1	72.9	80.9
Interior, private and mill.....	20,725	9,180	10,101	9,090	44.3	48.7	43.9
Interior, terminals.....	20,600	18,875	18,673	18,038	91.6	90.6	87.6
Pacific coast.....	20,106	15,081	11,453	9,769	75.0	57.0	48.6
Fort William-Port Arthur.....	90,517	51,106	76,635	58,524	56.5	84.7	64.7
Georgian Bay and upper Lake ports...	36,641	33,394	9,741	32,995	91.1	26.6	90.0
Lower Lake and upper St. Lawrence ports.....	19,100	14,390	9,518	14,495	75.3	49.8	75.9
Lower St. Lawrence ports.....	27,912	21,118	17,296	21,675	75.7	62.0	77.7
Maritime ports ¹	7,193	6,227	2,793	6,031	86.6	38.8	83.8
Totals, 1954-55.....	580,969	416,704	402,688	444,143	71.7	69.3	76.4

¹ Excludes Newfoundland.

**28.—Licensed Grain Storage Capacity and Grain in Store, Crop Years
1954-55 and 1955-56—concluded**

Crop Year and Storage Position	Licensed Storage Capacity	Canadian Grain in Licensed Storage			Proportion of Licensed Storage Capacity Occupied		
	Dec. 1, 1955	Nov. 30, 1955	Mar. 28, 1956	July 31, 1956	Nov. 30, 1955	Mar. 28, 1956	July 31, 1956
1955-56	'000 bu.	'000 bu.	'000 bu.	'000 bu.	p.c.	p.c.	p.c.
Western country.....	352,824	270,384	251,242	295,782	76.6	71.2	83.8
Interior, private and mill.....	20,595	8,899	8,809	8,526	43.2	42.8	41.4
Interior, terminals.....	23,100	19,615	18,608	18,559	84.9	80.6	80.3
Pacific coast.....	20,106	7,124	14,174	12,349	35.4	70.5	61.4
Fort William-Port Arthur.....	90,517	51,228	71,993	46,544	56.6	79.5	51.4
Georgian Bay and upper Lake ports..	36,641	31,907	7,724	30,064	87.1	21.1	82.1
Lower Lake and upper St. Lawrence ports.....	20,400	14,769	10,572	14,483	72.4	51.8	71.0
Lower St. Lawrence ports.....	27,912	20,622	14,986	16,347	73.9	53.7	58.6
Maritime ports ¹	7,229	6,680	3,119	365	92.4	43.1	5.0
Totals, 1955-56.....	599,325	431,227	401,228	443,019	72.0	66.9	73.9

¹ Excludes Newfoundland.

Subsection 2.—Cold Storage and Storage of Foods

Cold Storage Warehouses.—Under the Cold Storage Act (R.S.C. 1952, c. 52), as amended (R.S.C. 1952, c. 313), subsidies are granted by the Federal Government to encourage the construction and equipment of cold storage warehouses open to the public. The Act is administered by the Department of Agriculture.

There are five classifications of cold storage warehouses in Canada: (1) public warehouses that store foods and food products and where the entire space is open to the public; (2) semi-public, or those that store foods and where part of the space is retained for the products of the owner and the remainder is available to the public; (3) private, or those that store foods and food products and allot no space to the public, a classification that includes refrigerated space in connection with abattoirs, creameries, dairies, cheese factories and wholesale and retail distributing warehouses; (4) locker plant, where the total space is occupied by lockers for rental to the public and where food and food products may be cut, processed, chilled and frozen for storage in lockers; and (5) bait depots, where space is used solely or principally for the freezing and storing of bait for the use of fishermen.

No hard and fast rule can be laid down for distinguishing between public and private warehouses. In general those owned and operated by firms trading in the goods stored in the warehouse are considered as private, although most of these places rent space to the public when it is not required for their own purposes.

The figures in Tables 29 and 30, compiled by the Department of Agriculture, give some idea of the cold storage warehouse capacity in Canada, but it must be explained that it is not possible to secure completely accurate information on this subject and that the figures are approximations only.

29.—Cold Storage Warehouses by Province, Year Ended Mar. 31, 1957

NOTE.—Figures are approximate only.

Province	Subsidized Public Warehouses				All Warehouses	
	No.	Refrigerated Space cu. ft.	Cost \$	Total Subsidy \$	No.	Refrigerated Space cu. ft.
Newfoundland.....	2	44,078	199,700	66,566	54	1,651,046
Prince Edward Island.....	11	337,517	308,408	95,966	25	472,120
Nova Scotia.....	23	4,997,195	4,048,342	1,206,515	79	5,667,221
New Brunswick.....	9	1,575,359	1,153,959	350,328	47	2,119,332
Quebec.....	54	5,482,839	4,956,336	1,582,193	269	19,080,622
Ontario.....	75	11,955,023	9,198,226	2,856,193	891	33,160,615
Manitoba.....	9	3,141,532	2,180,934	654,986	165	9,575,447
Saskatchewan.....	23	1,172,381	1,762,526	562,939	250	4,842,040
Alberta.....	9	1,447,845	2,153,657	701,608	205	7,663,678
British Columbia.....	72	23,264,745	9,746,663	2,935,340	179	30,160,701
Totals.....	287	53,418,514	35,708,752	11,012,636	2,164	114,392,822

30.—Storage and Refrigerated Space by Province as at June 30, 1957

NOTE.—Figures are subject to revision.

Class of Storage	New- foundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
Public and Semi-Public—					
Warehouses..... No.	2	15	28	12	73
Refrigerated Space—					
Freezer.....cu. ft.	43,030	241,207	1,246,609	1,021,710	5,003,901
Cooler....."	1,048	30,142	3,420,222	652,268	7,299,490
Locker....."	..	43,520	15,668	20,706	22,418
Private—					
Warehouses..... No.	29	9	47	34	182
Refrigerated Space—					
Freezer.....cu. ft.	1,152,555	46,541	711,243	305,711	1,103,533
Cooler....."	106,008	109,475	229,119	98,798	5,466,488
Locker....."	..	..	4,600	469	..
Locker Plants—					
Warehouses..... No.	2	..	2	..	14
Refrigerated Space—					
Freezer.....cu. ft.	..	..	8,700	..	66,022
Cooler....."	..	..	3,296	..	35,232
Locker....."	55,050	..	12,020	..	83,538
Bait Depots—					
Warehouses..... No.	21	1	2	1	..
Refrigerated Space—					
Freezer.....cu. ft.	289,905	965	15,744	15,053	..
Cooler....."	750	270	..	4,617	..
Locker....."	2,700	..	..	..	..
Totals, Warehouses..... No.	54	25	79	47	269
Totals, Refrigerated Space.....cu. ft.	1,651,046	472,120	5,667,221	2,119,332	19,080,622

30.—Storage and Refrigerated Space by Province as at June 30, 1957—concluded

Class of Storage	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Totals
Public and Semi-Public—						
Warehouses..... No.	145	15	25	17	81	413
Refrigerated Space—						
Freezer.....cu. ft.	6,673,602	3,997,173	988,064	1,096,530	5,100,672	25,412,498
Cooler.....“	13,188,595	1,444,055	816,219	519,513	22,452,123	49,823,675
Locker.....“	601,632	37,150	96,162	86,759	29,621	953,636
Private—						
Warehouses..... No.	378	60	75	48	26	888
Refrigerated Space—						
Freezer.....cu. ft.	2,464,747	648,328	607,305	1,816,099	377,678	9,233,670
Cooler.....“	6,893,767	2,716,221	1,233,511	3,067,050	1,023,455	20,943,892
Locker.....“	63,774	..	20,734	11,985	..	101,562
Locker Plants—						
Warehouses..... No.	368	90	150	140	72	838
Refrigerated Space—						
Freezer.....cu. ft.	482,890	53,726	28,677	29,385	103,977	773,377
Cooler.....“	708,850	140,907	258,163	248,252	157,548	1,552,248
Locker.....“	2,082,758	537,887	793,205	788,175	915,627	5,268,260
Bait Depots—						
Warehouses..... No.	..	..	..	..	..	25
Refrigerated Space—						
Freezer.....cu. ft.	..	..	..	..	..	321,667
Cooler.....“	..	..	..	..	..	5,637
Locker.....“	..	..	..	..	..	2,700
Totals, Warehouses..... No.	891	165	250	205	179	2,164
Totals, Refrigerated Space.....cu. ft.	33,160,615	9,575,417	4,842,040	7,663,678	30,160,701	114,392,822

31.—Stocks of Food Commodities on Hand in Cold Storage and in Dairy Factories as at Jan. 1, 1955

Item	As at Jan. 1	Minimum during Year	Date at which Minimum Occurred	Maximum during Year	Date at which Maximum Occurred	Twelve-Month Average
Butter, Creamery, Dairy and Whey—						
In storage.....'000 lb.	90,920	58,531	May 1	127,772	Nov. 1	92,323
Total stock.....“	91,151	58,591	May 1	128,252	Nov. 1	92,623
Cheese, Cheddar—						
In storage.....“	42,195	30,427	May 1	45,921	Oct. 1	38,224
Total stock.....“	42,424	31,209	May 1	46,161	Oct. 1	38,950
Evaporated Whole Milk—						
Total stock.....“	46,480	21,326	Apr. 1	70,287	Oct. 1	45,393
Skim Milk Powder—						
Total stock.....“	11,848	4,222	May 1	13,422	Nov. 1	9,213
Eggs, Shell—						
In storage.....'000 cases	230	32	Dec. 1	361	June 1	217
Total stock.....“	230	33	Dec. 1	363	June 1	219
Eggs, Frozen—						
In storage.....'000 lb.	4,670	4,670	Jan. 1	9,939	Sept. 1	7,859
Poultry, Dressed and Eviscerated—						
In storage.....“	26,654	8,520	Aug. 1	30,121	Dec. 1	16,537
Total stock.....“	26,679	8,545	Aug. 1	30,696	Dec. 1	16,609
Pork, Fresh—						
In storage.....“	4,483	4,209	Sept. 1	5,829	Nov. 1	5,020

**31.—Stocks of Food Commodities on Hand in Cold Storage and in Dairy Factories
as at Jan. 1, 1955—concluded**

Item	As at Jan. 1	Minimum during Year	Date at which Minimum Occurred	Maximum during Year	Date at which Maximum Occurred	Twelve- Month Average
Pork, Frozen— In storage.....'000 lb.	18,366	7,803	Oct. 1	30,476	May 1	19,523
Pork, Cured and in Cure— In storage..... "	11,617	11,076	Oct. 1	14,762	Dec. 1	12,573
Lard— In storage..... "	5,490	3,332	Nov. 1	7,712	June 1	5,424
Beef, Fresh— In storage..... "	10,491	10,491	Jan. 1	14,053	Oct. 1	11,789
Beef, Frozen— In storage..... "	15,479	9,403	July 1	16,987	Dec. 1	12,400
Beef, Cured, etc.— In storage..... "	375	296	Apr. 1	592	Oct. 1	403
Veal— In storage..... "	3,954	1,892	Apr. 1	6,704	Dec. 1	4,763
Mutton and Lamb— In storage..... "	3,112	1,006	Aug. 1	3,880	Dec. 1	2,042
Fruit— Apples, Fresh— In storage.....'000 bu.	4,366	248	June 1	8,473	Nov. 1	2,268
Frozen Fruit— In storage.....'000 lb.	24,940	14,074	June 1	30,696	Sept. 1	22,780
In preservatives— In storage..... "	12,083	7,948	June 1	12,392	Dec. 1	10,559
Potatoes— In storage.....'000 bu.	16,514	1,883	June 1	29,585	Nov. 1	9,052

Cold Storage Holdings of Fish.—The stocks of frozen fish held in Canada during 1955 followed the usual seasonal trend. Normally, stocks decrease gradually during the early months of the year and reach a low point at the beginning of May; during subsequent months they increase and reach a peak at the beginning of October or November.

Holdings of frozen fish at any particular time tend to reflect the strength of the market as well as the level of production. While the production of frozen groundfish fillets (including blocks) was higher in 1955 than in 1954, the demand for these products in the United States market was greater than in the previous year. Even so, stocks remained higher than in 1954, especially during the first half of the year. Stocks of frozen Pacific halibut were high at the beginning of the year as a result of a depressed market for this product in North America, carried over from the late months of 1954 and continuing throughout the 1955 fishing season. The market recovered, however, towards the end of the year. Production was lower than in 1954 and, on the average, stocks were also somewhat lower. The production of frozen Pacific salmon was also below that of 1954 and stocks were considerably below the 1954 level.

Average monthly holdings of the main fish products in 1954 and 1955 are shown in Table 32.

32.—Storage Stocks of Fish by Month and Type 1954 and 1955

NOTE.—Stock totals are as at the beginning of each month; stocks of individual products are monthly averages.

Month	1954	1955	Group and Product	1954	1955
	'000,000 lb.			'000,000 lb.	
Jan. 1.....	51.9	49.5	Frozen, Fresh Seafish¹.....	40.3	31.1
Feb. 1.....	43.6	42.5	Salmon, Pacific, dressed and filleted.....	7.1	5.1
Mar. 1.....	33.4	33.9	Halibut, Pacific, dressed.....	7.9	7.5
Apr. 1.....	24.9	23.5	Herring, Atlantic, round.....	3.4	0.8
May 1.....	24.6	24.5	Cod, Atlantic, filleted.....	5.1	6.6
June 1.....	32.0	28.1	Frozen, Fresh Inland Fish¹.....	3.3	4.9
July 1.....	39.5	37.9	Whitefish, dressed and filleted.....	0.7	1.2
Aug. 1.....	46.9	47.8	Tullibee, round or dressed.....	0.3	0.3
Sept. 1.....	58.0	54.9	Pickarel (yellow), dressed and filleted.....	0.7	0.9
Oct. 1.....	65.8	54.7	Frozen, Smoked Fish¹.....	2.3	2.4
Nov. 1.....	68.5	53.9	Cod, Atlantic, filleted.....	1.3	1.3
Dec. 1.....	61.9	46.2	Sea herring, dressed.....	0.5	0.5
			Haddock, dressed.....	0.2	0.4
Averages.....	45.9	41.4	Totals.....	45.9	41.4

¹ Includes other items not listed.

Cold Storage of Dairy Products.—Cold storage facilities are a necessary adjunct in the manufacture of dairy products, most of which are perishable in varying degrees. All creameries have facilities for the storing of butter, the size and type of storage depending on the size of the creamery. If the butter produced at small country plants is not printed for immediate sale, the butter solids are disposed of or are transported to larger creameries where better refrigeration is available or to private or public cold storages in the larger urban centres. Temperature control is important in the curing process for cheese as well as in the prevention of deterioration. Most cheese factories are equipped with mechanical refrigeration and are required to have storage capacity for 17 days' produce during the period of maximum manufacture. The cheese is then transferred to central warehouses. As soon as milk is bottled it is placed in storage and held until delivery. Dry whole milk and other dried milk products containing fat are usually stored in cool air chambers to prevent rancidity.

Cold Storage of Apples and Potatoes.—Cold storage space for apples in Canada has increased rapidly in recent years as a result of the promotion of orderly marketing, the extension of the marketing season generally, and increased production in some areas. The trend has followed the curtailment in shipments to traditional markets in the United Kingdom and other European countries after World War II. There has been an increase recently in the construction of both private and co-operatively owned storages, particularly in the Province of Quebec.

Potatoes are not ordinarily held in cold storage but recently there has been an increase in the construction of potato storage houses and warehouses in the commercial producing areas.

Subsection 3.—Storage of Petroleum and Petroleum Products

Bulk storage plants for petroleum and petroleum products are established at convenient distributing centres, usually on a waterfront so that full advantage may be taken of the lower cost of water-borne traffic. From these centres the goods are transferred by boat, rail or truck to smaller distributing depots or directly to retail outlets. The principal refining and distributing centres are located at or near Halifax, Quebec, Montreal, Ottawa, Toronto, Sarnia, Fort William, Regina, Calgary, Turner Valley, Edmonton and Vancouver.

33.—Petroleum and Petroleum Products in Storage as at Jan. 1, 1956 and 1957

(Barrels of 35 Imperial gallons)

Product	1956	1957
	bbl.	bbl.
Crude oil.....	20,611,836	23,265,678
Liquefied petroleum gas.....	77,012	99,332
Petro-chemical feed stocks.....	20,861	24,280
Naphtha specialties.....	299,887	271,924
Aviation gasoline.....	1,498,748	1,101,526
Motor gasoline.....	14,795,328	18,396,415
Aviation turbo-fuel.....	615,230	585,056
Kerosene, stove oil and tractor fuel.....	3,674,612	5,180,014
Diesel fuel.....	3,524,148	4,640,484
Light fuel oil (Nos. 2 and 3).....	13,108,360	15,280,104
Heavy fuel oil (Nos. 4, 5 and 6).....	4,750,853	5,755,440
Asphalt.....	905,834	917,405
Coke.....	23,950	32,632
Lubricating oil and grease.....	1,232,165	1,429,452
Wax and candles.....	16,090	11,271
Other products.....	266	52,761
Still gas.....	726	298
Unfinished products.....	5,578,485	5,179,505

Subsection 4.—General Warehousing

Public Warehouses.—The summary statistics of the warehousing industry in Canada presented in Table 34 cover the operations of the majority of firms offering warehousing and storage facilities to the public. The 1956 statistics include returns from 227 operators as compared with 195 reporting in 1955. Associations and organizations such as co-operatives operating warehouses or storages for their own members are not included nor are packing houses and other firms operating storage facilities in connection with their respective businesses. Many public warehousing companies also operate a local moving and cartage service and others a motor carrier business, including long-distance moving. For some firms, revenues from motor carrier activities represent a large percentage of total receipts. Small food lockers are not included except where they may be part of a general warehousing business.

34.—Summary Statistics of the Warehousing Industry 1954-56

Item	1954	1955	1956
Companies reporting..... No.	185	195	227
Investment in land, warehouses, etc..... \$	47,649,107	54,275,888	62,720,201
Warehousing Facilities—			
Dry storage (net)..... cu. ft.	58,095,164	67,564,183	79,948,180
Cold storage..... "	20,864,851	22,801,933	28,324,864
Revenue—			
Storage..... \$	12,987,959	13,423,170	15,758,690
Cartage and moving..... \$	13,506,767	15,470,320	18,973,054
Miscellaneous..... \$	8,769,871	11,158,406	14,137,787
Total Revenue..... \$	35,264,597	40,051,896	48,869,531
Operating expenses..... \$	31,320,091	36,013,753	43,799,167
Net Operating Revenue..... \$	3,944,506	4,038,143	5,070,364
Salaried employees..... No.	1,452	1,672	1,885

34.—Summary Statistics of the Warehousing Industry 1954-56—concluded

Item		1954	1955	1956
Wage Earners—				
Regular.....	No.	5,480	5,830	6,294
Casual.....	"	690	880	1,112
Salaries and wages paid.....	\$	16,380,795	18,804,462	22,466,569
Motor Vehicles—				
Trucks.....	No.	1,525	1,595	1,850
Tractors.....	"	1	432	633
Semi-trailers.....	"	477	474	654
Trailers.....	"	94	92	77

¹ Included with semi-trailer units.

Customs Warehouses.—Warehouses for the storage of imported goods are known as customs warehouses. These are divided into eight classes: (1) those occupied by the Federal Government, some of which are used for examination and appraisal of imported goods and others, known as Queen's warehouses, are used for the storage of unclaimed, abandoned, seized or forfeited goods; (2) warehouses, consisting of an entire building or part thereof properly partitioned from the remainder of the building, which are used exclusively for the storage of imported goods consigned to the operator of the warehouse; (3) buildings or parts of buildings properly partitioned off, used for storage of imported goods consigned to the operator or others; (4) sufferance warehouses operated by the owners of vessels for the storage of in-bond goods transported by water or air, those operated by railway companies and express companies, or any person or group of persons other than those specified previously; (5) yards, sheds or other suitable enclosures for the storage of imported coal and coke; (6) farms, yards, sheds, etc., which an importer of horses or sheep intends to use for the feeding and pasturing of imported animals; (7) warehouses for the storage of animals (not including horses for racing), and articles for exhibition or competition for prizes; (8) yards, sheds or other suitable enclosures which importers intend to use for the storage of goods too heavy or too bulky to be admitted to an established customs warehouse.

Subsection 5.—Bonded Warehousing and Storage of Wines

Bonded Warehousing.—The Excise Duty Branch of the Department of National Revenue considers any premises licensed under the Excise Act to be a warehouse, whether for storage of raw materials to produce finished tobacco or cigar products or for spirits or malt used for brewing. Practically the total production of spirits is placed in bonded warehouses and only a small part of the output of beer is retained in storage. Wine, unlike spirits and beer, is not secured under bond. All imports of alcoholic beverages must go through bonded warehouses before being released to Provincial Liquor Commissions or Boards, or other agencies authorized by the Commissions or Boards to take alcoholic beverages out of bond. Similarly, tobacco, cigars and cigarettes that are not stamped and duty paid are secured in bond. In addition to these warehouses, there are those in which no manufacturing or production is carried on but which are used solely for the storage of goods upon which duty has not been paid. Goods are stored in these warehouses usually for the purpose of rapid distribution and for delivery as ships' stores.

Table 35 shows the quantities of distilled liquor, tobacco, cigars, and cigarettes in bond in recent years. In addition, the year-end inventories of beer in breweries was 27,613,682 gal. in 1956; information for 1957 is not yet available.

35.—Distilled Liquor, Tobacco, Cigars and Cigarettes in Bond, Quarterly 1953-57

Item and Quarter		1953	1954	1955	1956	1957
Distilled Liquor—						
March.....	'000 pf. gal.	92,089	95,400	102,925	110,084	117,567
June.....	"	93,339	97,845	105,047	112,589	120,613
September.....	"	92,501	98,081	105,773	112,875	120,058
December.....	"	93,174	99,477	107,084	110,651	120,371
Tobacco, Unmanufactured—						
March.....	'000 lb.	226,832	217,296	229,016	213,359	199,716
June.....	"	198,058	190,540	202,793	187,570	179,079
September.....	"	168,792	163,155	171,272	157,964	148,881
December.....	"	166,194	171,126	175,983	155,715	119,584
Cigars—						
March.....	'000	2,726	3,505	2,774	2,521	2,986
June.....	"	2,221	2,952	2,121	1,336	1,170
September.....	"	2,060	1,867	1,359	1,145	1,126
December.....	"	1,407	1,090	173	727	1,194
Cigarettes at 3 lb. or under—¹						
March.....	'000	7,499	17,574	5,634	3,967	8,656
June.....	"	4,687	14,612	7,512	4,966	3,247
September.....	"	7,108	2,481	1,842	3,812	11,440
December.....	"	9,763	3,669	3,740	2,690	8,419

¹ Excludes Newfoundland.

Beverage spirits, as shown in Table 36, refer to spirits released for consumption but not to industrial alcohol; malt beer does not include beer made from duty-free malt; malt used is the total malt used to produce the malt beer; tobacco includes all types of manufactured tobacco products and snuff.

36.—Beverage Spirits, Malt Beer, Malt, Tobacco and Tobacco Products taken out of Bond and Destined for Consumption 1948-57

Year	Beverage Spirits ¹	Malt Beer ¹	Malt Used	Cigars	Cigarettes	Tobacco
	pf. gal.	gal.	lb.	'000	'000	'000 lb.
1948.....	8,259,233	172,630,562	349,081,232	210,016	15,852,875	29,174
1949.....	8,841,888	172,963,887	348,786,984	208,208	16,839,654	28,710
1950.....	9,131,903	171,974,662	340,287,033	198,981	17,167,729	29,187
1951.....	10,801,225	179,648,482	353,130,285	169,136	15,667,266	30,177
1952.....	11,171,830	195,780,017	378,764,899	200,263	17,848,325	33,637
1953.....	12,445,166	202,897,996	381,508,232	235,587	21,001,492	28,732
1954.....	11,946,178	²	370,328,106	244,248	22,113,102	26,846
1955.....	11,847,649	²	372,693,929	252,633	24,576,087	26,000
1956.....	13,733,393	²	386,064,673	255,570	26,997,705	23,272
1957.....	13,830,292	²	404,697,177	292,650	30,149,746	22,338

¹ Duty has been paid herein on the malt.² Duty solely on gallonage basis since 1954.

Storage of Wines.—The wine industry is confined to a few localities such as the Niagara Peninsula in Ontario and the Okanagan Valley in British Columbia. Firms manufacturing native wines are not bonded, as far as the Federal Government is concerned, nor is wine in storage for maturing placed in bond. The only goods warehoused in bond in connection with wineries are sugar supplies and supplies of grape spirit distilled by the distilleries and held by the wineries for fortifying wines.

37.—Native Wine Produced and Placed in Storage for Maturing 1951-56

Year	Ontario		Other Provinces		Total	
	gal.	\$	gal.	\$	gal.	\$
1951.....	4,182,767	2,729,147	494,288	407,849	4,677,055	3,136,996
1952.....	4,383,358	2,764,750	552,694	440,864	4,936,052	3,205,614
1953.....	3,562,498	2,237,316	572,692	430,574	4,135,190	2,667,890
1954.....	4,414,981	2,688,060	640,183	510,464	5,055,164	3,198,524
1955.....	5,059,418	3,059,868	624,670	480,491	5,684,088	3,540,359
1956.....	4,945,429	2,880,176	528,447	415,763	5,473,876	3,295,939

Section 4.—Co-operative Organizations*

A little over 30 p.c. of all farm products marketed in Canada during the crop year ended July 31, 1956, was marketed through co-operatives. The proportion varied by type of product marketed as follows: grains, hay and seeds 62 p.c.; dairy products 24 p.c.; livestock 16 p.c.; poultry and eggs 9 p.c.; wool 78 p.c.; fruits and vegetables 25 p.c.; honey 47 p.c.; and maple products 62 p.c. These proportions apply to a business volume of marketing co-operatives of \$751,000,000, an amount slightly higher than that of \$704,000,000 for 1955. Co-operatives for the purchase of supplies reported sales of \$259,000,000 in 1956.

Marketing and purchasing co-operatives, owned and operated by farmers, make up most of the co-operative movement in Canada. The total business volume of these co-operatives in 1956 exceeded \$1,000,000,000 compared with \$941,000,000 in 1955. Membership in these organizations rose to 1,255,788 although this total includes duplication because many persons are members of more than one organization. The total number of organizations was 2,041.

Nearly 60 p.c. of the membership in marketing and purchasing co-operatives occurs in the Prairie Provinces, with Saskatchewan holding first place.

* Prepared under the direction of the Deputy Minister of Agriculture, by the Economics Division, Marketing Service.

38.—Summary Statistics of Co-operative Marketing and Purchasing Associations, Crop Years Ended July 31, 1947-56

Year	Associations	Places of Business	Patrons	Sales of Farm Products	Sales of Supplies	Total Business ¹
	No.	No.	No.	\$	\$	\$
1947.....	2,095	5,084	1,036,498	578,638,214	127,001,488	712,583,246
1948.....	2,249	5,423	1,195,372	616,347,477	157,874,045	780,084,955
1949.....	2,378	5,667	1,209,520	783,293,225	191,804,630	982,232,002
1950.....	2,495	5,761	1,223,582	803,638,962	206,082,408	1,015,264,763

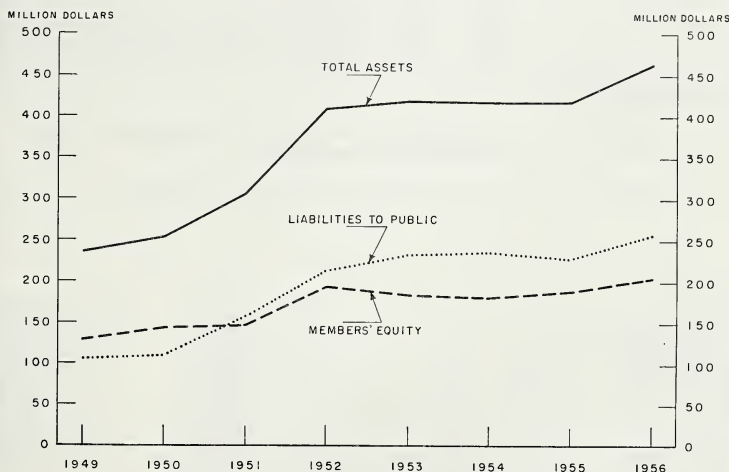
¹ Includes other revenue.

38.—Summary Statistics of Co-operative Marketing and Purchasing Associations, Crop Years Ended July 31, 1947-56—concluded

Year	Associations	Places of Business	Patrons	Sales of Farm Products	Sales of Supplies	Total Business ¹
	No.	No.	No.	\$	\$	\$
1951.....	2,348	5,830	1,195,034	769,264,824	209,985,815	988,459,832
1952.....	2,194	5,470	1,108,803	840,113,835	234,848,220	1,085,854,744
1953.....	2,221	4,987	1,081,493	874,698,323	245,629,603	1,147,590,401
1954.....	2,086	4,510	1,005,266	733,012,042	234,583,125	986,297,820
1955.....	1,949	5,016	1,087,522	704,047,067	228,446,485	941,377,889
1956.....	2,041	5,353	1,115,412	750,622,909	258,751,870	1,019,750,088
	Value of Plant	Total Assets	Liabilities to the Public	Shareholders or Members	Members' Equity	
	\$	\$	\$	No.	\$	
1947.....	53,027,212	168,195,387	71,403,750	982,990	96,791,637	
1948.....	75,009,655	201,603,705	89,381,360	1,127,229	112,222,345	
1949.....	89,832,908	236,962,924	106,599,688	1,144,698	130,363,236	
1950.....	98,514,782	254,478,777	111,092,652	1,173,126	143,386,125	
1951.....	99,790,191	306,834,165	159,357,602	1,184,235	147,476,563	
1952.....	129,983,112	410,210,309	214,737,270	1,163,803	195,473,039	
1953.....	117,228,290	419,930,634	234,339,211	1,195,985	185,591,423	
1954.....	120,928,669	418,887,674	235,993,511	1,196,426	182,894,163	
1955.....	126,349,756	419,387,477	229,004,480	1,199,808	190,382,997	
1956.....	137,673,470	463,695,625	259,027,143	1,255,788	204,668,482	

¹ Includes other revenue.

ASSETS, LIABILITIES AND MEMBERS' EQUITIES, CO-OPERATIVE MARKETING AND PURCHASING ASSOCIATIONS, YEARS ENDED JULY 31, 1949-56



39.—Summary Statistics of Co-operative Marketing and Purchasing Associations by Province, Crop Years Ended July 31, 1954-56

Province		Associations	Shareholders or Members	Sales of Products	Sales of Merchandise	Total Business ¹
		No.	No.	\$	\$	\$
Newfoundland.....	1954	44	7,074	180,549	3,844,433	4,044,608
	1955	45	5,014	240,589	3,801,041	4,057,785
	1956	51	7,483	2,562	4,122,375	4,142,955
Prince Edward Island.....	1954	20	5,631	941,711	2,975,402	4,008,483
	1955	7	2,070	639,366	1,126,954	1,787,767
	1956	12	3,831	1,232,703	2,261,996	3,507,573
Nova Scotia.....	1954	91	22,869	4,632,093	12,477,257	17,241,968
	1955	91	25,158	5,284,909	13,959,639	19,549,128
	1956	98	26,551	5,595,364	13,679,087	19,680,439
New Brunswick.....	1954	48	10,548	1,647,002	4,534,654	6,219,955
	1955	57	13,178	7,162,436	6,158,981	13,461,558
	1956	50	13,036	6,839,919	6,510,151	13,441,421
Quebec.....	1954	648	87,029	68,477,665	58,502,780	128,445,275
	1955	612	85,320	75,124,857	58,072,616	132,439,402
	1956	632	94,187	80,102,476	65,823,982	148,220,918
Ontario.....	1954	341	105,718	100,352,445	45,007,059	146,013,121
	1955	294	87,788	109,722,603	38,678,610	150,864,326
	1956	306	106,074	97,750,374	47,920,527	147,494,942
Manitoba.....	1954	115	132,729	60,789,594	14,323,608	75,853,590
	1955	122	117,408	59,539,203	14,424,425	74,536,890
	1956	119	137,991	67,134,182	15,795,344	83,907,226
Saskatchewan.....	1954	495	461,455	216,701,860	52,038,783	272,629,003
	1955	466	468,580	193,797,452	52,483,674	248,307,589
	1956	478	429,080	236,240,744	56,277,653	295,002,845
Alberta.....	1954	180	203,970	144,564,061	14,739,124	159,811,268
	1955	148	214,274	125,741,602	18,771,431	145,050,856
	1956	176	221,277	134,987,496	20,027,535	155,652,880
British Columbia.....	1954	99	44,820	52,067,267	15,160,719	68,359,211
	1955	102	50,975	56,175,874	15,499,983	73,146,511
	1956	113	51,281	55,269,730	18,629,330	75,428,928
Interprovincial.....	1954	5	114,553	82,657,795	10,979,306	103,671,338
	1955	5	129,773	70,618,176	7,469,131	78,176,077
	1956	6	164,997	65,467,359	7,703,890	73,269,961
Totals.....	1954	2,086	1,196,426	733,012,042	234,583,125	986,297,620
	1955	1,949	1,199,898	704,047,067	228,446,485	941,377,889
	1956	2,041	1,255,788	750,622,999	258,751,870	1,019,750,688

¹ Includes other revenue.

40.—Products Handled by Marketing and Purchasing Co-operatives, Crop Years Ended July 31, 1955 and 1956

Product	1955		1956	
	Associations ¹	Value of Sales	Associations ¹	Value of Sales
	No.	\$	No.	\$
Marketing.....	1,030	704,047,067	1,010	750,622,909
Dairy products.....	509	143,612,420	505	153,966,741
Fruit and vegetables.....	129	32,004,690	133	31,632,954
Grain and seed.....	90	316,537,572	119	362,094,917
Livestock.....	278	104,598,523	308	113,272,985
Eggs and poultry.....	206	24,860,590	199	28,857,040
Lumber and wood.....	25	1,197,154	43	1,438,579
Honey.....	8	1,597,171	8	2,028,142
Wool.....	14	1,853,566	16	1,636,756
Fur.....	11	592,420	12	575,332
Tobacco.....	6	72,968,803	4	50,111,481
Maple products.....	2	3,355,418	3	4,136,629
Miscellaneous.....	43	868,740	58	871,353

For footnote, see end of table.

**40.—Products Handled by Marketing and Purchasing Co-operatives, Crop Years
Ended July 31, 1955 and 1956—concluded**

Product	1955		1956	
	Associa- tions ¹	Value of Sales	Associa- tions ¹	Value of Sales
	No.	\$	No.	\$
Merchandising	1,664	228,446,485	1,602	258,751,870
Food products.....	923	61,462,672	798	68,172,755
Clothing and home furnishings.....	538	9,320,715	502	9,888,878
Petroleum products and auto accessories.....	606	38,450,953	608	43,777,255
Feed, fertilizer and spray material.....	839	75,070,507	864	88,086,254
Machinery and equipment.....	330	8,256,808	421	10,615,777
Coal, wood and building material.....	650	17,949,866	605	17,122,552
Miscellaneous.....	979	17,934,964	1,003	20,188,399
Totals	2,694	932,493,552	2,612	1,009,374,779

¹ Duplication exists in this column as some associations market produce as well as handle supplies. Some associations market more than one product and some handle many of the supplies listed.

Fishermen's co-operatives, while small in number, are an important factor in the lives of Canadian fishermen. They had a membership of over 9,500 in 1956.

Service co-operatives reported revenues of \$13,000,000. This revenue was obtained by 552 organizations providing housing, medical insurance, transportation and other services. Fire and life insurance associations are not included in these figures.

The financial structure of marketing and purchasing co-operatives includes assets of \$464,000,000 and members' equity of \$205,000,000.

The ten co-operative wholesales in operation reported a business volume of nearly \$188,000,000 and assets of \$55,000,000.

Section 5.—Interprovincial Freight Movements*

Statistics on interprovincial trade are difficult to collect because there are no controls or barriers to it. The only comprehensive statistics available are the loadings and unloadings of freight carried by the railways. Railway freight traffic is segregated into 99 classes and the differences between loadings and unloadings are the imports and exports *by rail* for the respective provinces. However, freight can be imported by rail and exported by water, as with western grain which may be moved to the Ontario ports of Fort William and Port Arthur. Consequently, the statistics of Table 41 must not be taken as a measure of total interprovincial trade; these figures indicate interprovincial movement of railway freight which is one aspect only of that trade.

* Revised in the Transportation Section, Public Finance and Transportation Division, Dominion Bureau of Statistics.

41.—Railway Revenue Freight Movement by Province 1954 and 1955

Province	Loaded		Received from Foreign Connections		Totals Originated ¹	
	1954	1955	1954	1955	1954	1955
	tons	tons	tons	tons	tons	tons
Newfoundland.....	1,148,093	1,334,374	95	30	1,148,188	1,334,404
Prince Edward Island.....	296,338	305,773	26	—	296,364	305,773
Nova Scotia.....	9,401,113	10,761,398	141,076	150,779	9,542,189	10,912,177
New Brunswick.....	4,105,558	4,445,986	619,937	620,182	4,725,495	5,066,168
Quebec.....	20,705,415	30,469,062	7,770,050	8,056,108	28,475,465	38,525,170
Ontario.....	34,637,419	40,619,626	22,495,868	25,125,212	57,133,287	65,744,838
Manitoba.....	7,043,262	7,227,710	586,493	532,790	7,629,755	7,760,500
Saskatchewan.....	12,759,920	12,142,281	283,275	247,958	13,043,195	12,390,239
Alberta.....	11,014,527	11,347,667	49,645	74,766	11,064,172	11,422,433
British Columbia.....	11,186,822	12,802,992	1,173,123	1,391,848	12,359,945	14,194,840
Totals	112,298,467	131,456,869	33,119,588	36,199,673	145,418,055	167,656,542

For footnote, see end of table, page 970.

41.—Railway Revenue Freight Movement by Province 1954 and 1956—concluded

Province	Unloaded		Delivered to Foreign Connections		Totals Terminated ¹	
	1954	1955	1954	1955	1954	1955
	tons	tons	tons	tons	tons	tons
Newfoundland.....	1,119,769	1,369,667	176,120	149,221	1,295,889	1,518,888
Prince Edward Island.....	406,172	487,944	207	—	406,379	487,944
Nova Scotia.....	8,046,429	9,314,525	610,699	934,227	8,657,128	10,248,752
New Brunswick.....	3,631,369	3,955,975	1,552,937	2,183,152	5,184,306	6,139,127
Quebec.....	22,686,757	32,109,414	7,333,175	7,639,691	30,019,932	39,749,105
Ontario.....	43,035,094	48,167,803	23,132,823	25,690,836	66,167,917	73,858,639
Manitoba.....	7,272,141	7,818,045	898,966	1,019,095	8,171,107	8,837,140
Saskatchewan.....	4,855,764	4,563,168	1,056,931	1,309,675	5,915,695	5,872,843
Alberta.....	5,190,486	6,082,121	16,670	25,148	5,207,156	6,107,269
British Columbia.....	8,267,899	8,950,801	5,320,577	4,958,373	13,588,476	13,909,174
Totals.....	101,514,880	122,799,463	40,099,105	43,909,418	144,613,985	166,708,881

¹ Figures for freight originating and freight terminating do not agree because freight that originates within a certain year does not all terminate within the same year.

PART II.—GOVERNMENT AIDS TO AND CONTROL OF DOMESTIC TRADE

During the postwar period, the elaborate system of government control of trade that the war effort made necessary was gradually relaxed (*see* the 1948-49 Year Book, pp. 837-841) until, by the beginning of 1949, only those measures to protect domestic requirements and prevent the forcing upward of prices in the Canadian market remained; since then even these have practically disappeared.

Section 1.—Controls Affecting the Handling and Marketing of Grain

The agencies exercising control of the grain trade in Canada include the Board of Grain Commissioners which since 1912 has administered the provisions of the Canada Grain Act, and the Canadian Wheat Board which operates under the Canadian Wheat Board Act 1935. The former is a quasi-judicial and administrative body which, through the powers vested in it in matters of interprovincial transportation and patents and copyrights, gives the Federal Government complete power to control the handling of grain; it has no power or duties in respect of grain prices. The Canadian Wheat Board, which began to function in the autumn of 1935, was a natural outgrowth of government stabilization measures that were taken during the depression years of the 1930's in regard to the marketing of grain crops. During this period the Government acquired a considerable quantity of wheat and, in the 1935 session of Parliament, legislation was passed to serve the dual purpose of disposing of the holdings so acquired and at the same time arranging for the marketing of new crops.

An account of the organization and functions of the Board of Grain Commissioners appears in the 1941 Year Book, pp. 481-482. An article on the operations of the Canadian Wheat Board is commenced in the 1939 Year Book, pp. 569-580, and concludes in the 1947 edition.

Section 2.—Combinations in Restraint of Trade*

The purpose of Canadian anti-combines legislation is to assist in maintaining free and open competition as a prime stimulus to the achievement of maximum production, distribution and employment in a system of free enterprise. To this end, the legislation

* Revised by T. D. MacDonald, Q.C., Director of Investigation and Research, Combines Investigation Act, Department of Justice, Ottawa.

seeks to eliminate certain practices in restraint of trade, which serve to prevent the nation's economic resources from being most effectively used for the advantage of all citizens.

The first federal legislation in this field, enacted in 1889, is still effective in amended form as Sect. 411 of the Criminal Code and is the mainstay of Canadian anti-combines legislation. Generally speaking, this Section forbids suppliers (manufacturers, wholesalers, retailers) to arrange among themselves to eliminate competition over a substantial part of any market by limiting production, restricting distribution or fixing prices.

Sect. 411 of the Criminal Code and the Combines Investigation Act (R.S.C. 1952, c. 314) are complementary pieces of legislation. The latter was enacted in 1923 and amended extensively in 1935, 1937, 1946, 1949, 1951 and 1952. It repeats in Sects. 2 and 32 some of the substance of Sect. 411 but, while the latter relates chiefly to arrangements among separate firms, the former embraces any "merger, trust or monopoly" relating to a commodity, which has operated or is likely to operate to the detriment or against the interests of the public.

The Combines Investigation Act, in Sect. 34, also forbids a supplier of goods from prescribing the prices at which they are to be resold by wholesalers and retailers, i.e., the practice of "resale price maintenance". The supplier may, however, *suggest* resale prices as long as he does nothing to induce or require the trade to adhere to them.

Sect. 412 of the Criminal Code deals with what are commonly called "price discrimination" and "predatory price cutting". It provides that a supplier may not make a practice of discriminating among those of his trade customers who come into competition with each other, by giving one a preferred price which is not available to another if the second is willing to buy in like quantities and qualities as the first; and it also forbids a supplier from selling at prices lower in one locality than in another, or unreasonably low anywhere, if the purpose or effect of his actions is to lessen competition substantially or to eliminate a competitor.

These provisions, Sects. 411 and 412 of the Criminal Code and Sects. 2, 32 and 34 of the Combines Investigation Act, contain the substantive law relating to restrictive trade practices. The other provisions of the Combines Investigation Act relate to investigation and enforcement.

The Act provides for a Director who is responsible for investigating combines and other restrictive practices, and a Commission (the Restrictive Trade Practices Commission) which is responsible for appraising the evidence submitted to it by the Director and the parties under investigation, and for making a report to the Minister. When there are reasonable grounds for believing that a forbidden practice is engaged in, the Director may obtain from the Commission authorization to examine witnesses, search premises, or require written returns. After examining all the information available, if the Director believes that it proves the existence of a forbidden practice, he submits a statement of the evidence to the Commission and to the parties believed to be responsible for the practice. The Commission then sets a time and place at which it hears argument on behalf of the Director in support of his statement; and hears argument and receives evidence on behalf of any persons against whom allegations have been made in the statement. Following this hearing the Commission prepares and submits a report to the Minister, ordinarily required to be published within thirty days.

The Act also provides for general inquiries into restraints of trade which, while not forbidden or punishable, may affect the public interest. It further provides that the courts, in addition to imposing punishment for a contravention of the legislation, may make an order restraining persons from embarking on, continuing or repeating a contravention. The constitutionality of the Section providing for restraining orders, which was enacted in 1952, has been upheld by the Supreme Court of Canada.

In the years 1951-56, the following reports of inquiries under the legislation have been published:—

- (1) Manufacture, Distribution and Sale of Mechanical Rubber Goods; Tires and Tubes; Accessories and Repair Materials; Rubber Footwear; Heels and Soles; Vulcanized Rubber Clothing.
- (2) Distribution and Sale of Bread and Other Bakery Products in the Winnipeg Area.
- (3) Manufacture, Distribution and Sale of Fine Papers.
- (4) Distribution and Sale of Coarse Papers in British Columbia.
- (5) Purchase of Maple Syrup and Maple Sugar in the Province of Quebec.
- (6) Manufacture, Distribution and Sale of Electrical Wire and Cable Products.
- (7) Resale Price Maintenance in the Sale of Soap and Soap Products in the Montreal District.
- (8) Price Discrimination between Retail Hardware Dealers in North Bay, Ont.
- (9) Resale Price Maintenance in the Sale of Certain Household Supplies in the Chicoutimi-Lake St. John District of Quebec.
- (10) Distribution and Sale of Gasoline at Retail in the Vancouver Area.
- (11) Resale Price Maintenance in the Sale of China and Earthenware.
- (12) Resale Price Maintenance in the Distribution and Sale of Television Sets in the Toronto District.
- (13) Manufacture, Distribution and Sale of Wire Fencing in Canada.
- (14) Distribution and Sale of Coal in the Timmins-Schumacher area of the Province of Ontario.
- (15) Loss Leader Selling.
- (16) Manufacture, Distribution and Sale of Beer in Canada.
- (17) Manufacture, Distribution and Sale of Asphalt and Tar Roofings and Related Products in Canada.
- (18) Resale Price Maintenance in the Distribution and Sale of Certain Household Appliances.
- (19) Manufacture, Distribution and Sale of Transmission and Conveyor Equipment and Related Products.
- (20) Retail Distribution and Sale of Coal in Winnipeg.
- (21) Manufacture, Distribution and Sale of Quilted Goods, Quilting Materials and Related Products.
- (22) Manufacture, Distribution and Sale of Boxboard Grades of Paperboard.
- (23) Production, Purchase and Sale of Flue-Cured Tobacco in Ontario.

These reports are obtainable from the Queen's Printer or from the office of the Director of Investigation and Research, Ottawa.

Section 3.—Trade Standards*

The Standards Division of the Department of Trade and Commerce consolidates under one Director the administration of the Electricity Inspection Act, the Gas Inspection Act, the Exportation of Power and Fluids and Importation of Gas Act, the Precious Metals Marking Act, the Weights and Measures Act, and the National Trade Mark and True Labelling Act.

Commodity Standards.—On Nov. 26, 1949, Parliament passed the National Trade Mark and True Labelling Act (R.S.C. 1952, c. 191) which provides a framework for the development of the National Standard and true labelling in order to circumvent public deception in advertising. In brief, the use of the National Standard is voluntary and compliance with commodity standards affects only those manufacturers who desire to use the national trade mark. In addition, where manufacturers descriptively label any commodity or container, it must be labelled accurately to avoid public deception. The regulation applying to the labelling of fur garments, for example, has been established as a code of fair practice throughout the merchandising field.

* Prepared by R. W. MacLean, Director, Standards Division, Department of Trade and Commerce, Ottawa.

Under the terms of the Precious Metals Marking Act 1946 (R.S.C. 1952, c. 215) commodities composed of gold, silver, platinum or palladium may be marked with a quality mark describing accurately the quality of the metal. Where such mark is used, a trade mark registered in Canada, or for which application for registration has been made, must also be applied. Gold-plated or silver-plated articles may also be marked under certain conditions outlined in the Act. The inspection staff of the Standards Division is engaged in the examination of advertising matter, in verifying the quality of articles offered for sale, and in checking the marks applied.

Weights and Measures.—The Weights and Measures Act (R.S.C. 1952, c. 292) prescribes the legal standards of weight and measure for use in Canada. The Act requires control of the type of all weighing and measuring devices used for commercial purposes and their periodic verification and surveillance directed towards the elimination of sales by short weight or short measure. The number of inspections made in the year ended Mar. 31, 1957, was 481,722 compared with 480,704 in 1955-56. The more important inspections comprised the following: weighing machines including scales of all kinds, 235,245; measuring machines for liquids 93,950; weights 131,101; other measures 21,426. Total expenditure was \$849,102 in 1956-57 compared with \$763,863 in 1955-56, and total revenue \$752,196 compared with \$710,206.

Electricity and Gas Inspection.—Responsibilities of the Standards Division under the Electricity Inspection Act (R.S.C. 1952, c. 94) and the Gas Inspection Act (R.S.C. 1952, c. 129) comprise the testing and stamping of every electricity and gas meter used throughout Canada for billing purposes, the object being to ensure the correct measurement of all electricity and gas sold. Canada is divided into 21 districts for administration of the two Acts and staff numbers 181. During the year ended Mar. 31, 1957, 1,224,752 electricity and gas meters were tested as compared with 1,202,415 in the preceding year. Revenue derived from the testing amounted to \$931,288, and expenditure to \$834,638.

1.—Electricity and Gas Meters in Use, Years Ended Mar. 31, 1948-57

Year	Electricity Meters	Gas Meters			
		Manufac- tured Gas	Natural Gas	Petroleum Gas	Total
	No.	No.	No.	No.	No.
1948.....	2,746,685	587,629	217,068	1,046	805,746 ²
1949.....	2,972,725	600,923	227,393	4,006	832,325 ²
1950 ¹	3,188,013	606,395	239,448	3,841	849,688 ²
1951.....	3,405,432	610,096	252,468	33	862,602 ²
1952.....	3,590,422	609,262	263,130	68	872,465 ²
1953.....	3,779,739	599,140	277,248	1,270	877,663 ²
1954.....	3,967,952	593,698	298,166	429	892,297 ²
1955.....	4,175,534	420,432	486,768	536	907,736
1956.....	4,380,889	416,338	507,875	3,151	927,364
1957.....	4,571,485	350,558	599,633	4,843	955,034

Newfoundland included from 1950.

Includes acetylene meters.

The Exportation of Power and Fluids and Importation of Gas Act (3-4 Elizabeth II, c. 14) was passed in 1955 to replace the Electricity and Fluid Exportation Act which came into force in 1907. Under its provisions, no electric energy or fluid, whether liquid or gaseous, may be exported from Canada and no gas imported into Canada without a licence. Total exports of electric energy during the year ended Mar. 31, 1957, amounted to 5,388,135,621 kwh. There were also exports of natural gas and crude oil as well as imports of natural gas.

Section 4.—Patents, Copyrights and Trade Marks*

Letters patent are issued subject to the provisions of the Patent Act, (R.S.C. 1952, c. 203) effective since 1935. Applications for protection relating to patents should be addressed to the Commissioner of Patents, Ottawa.

2.—Patents Applied for, Granted, etc., Years Ended Mar. 31, 1953-57

Item	1953	1954	1955	1956	1957
Applications for patents..... No.	16,405	18,565	19,448	21,048	21,762
Patents granted..... “	9,700	9,414	10,282	11,862	15,513
Granted to Canadians..... “	742	606	570	652	761
Caveats granted..... “	243	288	337	289	245
Assignments..... “	12,525	13,127	20,062	17,783	19,124
Fees received, net..... \$	756,714	847,874	1,086,278	1,234,810	1,405,136

The number of Canadian patents granted increased fairly steadily each year from 4,522 at the beginning of the century to a peak of 15,513 in the year ended Mar. 31, 1957. Roughly, 72 p.c. of the patents granted were to residents of the United States; 11 p.c. to residents of the United Kingdom and other Commonwealth countries and 5 p.c. to residents of Canada.

Printed copies of patents issued from Jan. 1, 1949, to date are available at a nominal fee. The Canadian *Patent Office Record* gives a brief digest of each patent.

Canadian and foreign patents may be consulted at the Patent Office Library. The Library has records of British patents and abridged specifications thereof from 1617 to date, and of United States patents from 1872 to date, as well as many patents, indexes, journals and reports from Australia, New Zealand, South Africa, India, Pakistan, France, Belgium, Austria, Norway, Mexico, Italy, Sweden, the Netherlands, Switzerland, Japan, Korea and Brazil.

Copyrights, Industrial Designs and Timber Marks.—Registration of copyright is governed by the Copyright Act (R.S.C. 1952, c. 55) in force since 1921. Applications for protection relating to copyrights should be addressed to the Commissioner of Patents, Ottawa.

The Act sets out the qualifications for a copyright and its duration: “Copyrights shall subsist in Canada . . . in every original literary, dramatic, musical and artistic work, if the author was, at the date of the making of the work, a British subject, a citizen or subject

* The material relating to patents and copyrights was revised by J. W. T. Michel, Commissioner of Patents, and that relating to trade marks by J. P. McCaffrey, Registrar of Trade Marks, Department of the Secretary of State, Ottawa.

of a foreign country which has adhered to the Berne Convention and the additional Protocol . . . or resident within Her Majesty's Dominions. The term for which the copyright shall subsist shall, except as otherwise expressly provided by this Act, be the life of the author and a period of fifty years after his death."

Copyright protection is extended to records, perforated rolls, cinematographic films, and other contrivances by means of which a work may be mechanically performed. The intention of the Act is to enable Canadian authors to obtain full copyright protection in Canada, in all parts of the Commonwealth, in foreign countries of the Copyright Union and in the United States of America.

Protection of industrial designs and of timber marks is afforded under the Trade Mark and Union Label Act and the Timber Marking Act. Registers of such designs and marks are kept by the Copyright Branch of the Patent Office and information regarding them is published in the *Patent Office Record*.

3.—Copyrights, Industrial Designs and Timber Marks Registered, Years Ended Mar. 31, 1953-57

Item	1953	1954	1955	1956	1957
Copyrights registered..... No.	4,976	5,060	5,193	5,151	5,099
Industrial designs registered..... "	431	560	286	586	601
Timber marks registered..... "	1	2	10	6	9
Assignments registered..... "	523	548	617	731	796
Fees received, net..... \$	20,681	21,181	21,324	21,747	21,628

Trade Marks.—The Trade Marks Office, a Branch of the Department of the Secretary of State, administers the Trade Marks Act (1-2 Elizabeth II, c. 49) which covers all legislation concerning the registration and use of trade marks and supersedes from July 1, 1954, former legislation enacted under the Unfair Competition Act, the Industrial Design and Union Label Act and the Shop Cards Registration Act. All correspondence relating to an application for registration of a trade mark or for the use of a trade mark should be addressed to the Registrar of Trade Marks, Ottawa.

A *Trade Marks Journal* is published weekly giving particulars of every registration of a trade mark and every registration of a registered user, as well as other advertisements and rulings required under the Act. The required fee payable on application for registration of a trade mark is \$25 and for registration of a person as a registered user of a trade mark, \$20.

4.—Trade Marks Registered, Years Ended Mar. 31, 1953-57

Item	1953	1954	1955	1956	1957
Trade marks registered..... No.	2,981	3,832	3,377	2,911	3,508
Trade mark registrations assigned..... "	1,499	2,063	2,040	2,652	1,858
Trade mark registrations renewed..... "	2,139	1,963	2,812	2,035	2,002
Certified copies prepared..... "	541	590	678	689	716
Fees received, net..... \$	138,524	159,191	222,029	326,619	260,305

Section 5.—Subventions and Bounties on Coal*

The major problem of the Canadian coal mining industry arises from the fact that its fields are situated far distant from the main consuming markets of the Provinces of Ontario and Quebec while these markets lie in close proximity to the bituminous and anthracite fields of the United States. Transportation subventions, which have been maintained in varying degree during the past 28 years, were designed to further the movement of Canadian coals to some portions of central Canada by equalizing as far as possible the laid-down costs of Canadian coals with imported coals. Subventions have been regulated by Orders in Council as it has not been considered practicable to fix the assistance by statute owing to the frequent changes in the competitive situation.

5.—Expenditure for Coal Subventions by Province 1952-56

Province	1952	1953	1954	1955	1956
Nova Scotia..... ton	1,897,451	1,874,410	2,561,321	2,588,400	2,543,302
\$	5,194,288	6,101,714	8,790,557	8,355,623	6,962,694
New Brunswick..... ton	2,851	8,981	58,036	33,108	21,359
\$	3,780	7,853	141,513	55,925	42,214
Saskatchewan..... ton	139,555	187,118	256,597	259,518	247,814
\$	113,645	161,439	218,341	222,454	215,407
Alberta and eastern British Columbia..... ton	613,651	606,749	998,558	730,905	782,228
\$	1,161,810	946,638	2,982,347	2,055,942	2,375,295
British Columbia bunker and export..... ton	59,254	1,592	709	219	1,290
\$	56,580	1,194	532	164	1,217
Totals..... ton	2,712,762	2,678,850	3,875,221	3,612,150	3,595,993
\$	6,530,103	7,218,838	12,133,290	10,693,108	9,596,827

The Canadian Coal Equality Act (R.S.C. 1952, c. 34), formerly known as the Coke Bounty Act, and Regulations made thereunder, provide that so long as the provisions of Tariff Item No. 1019 in Schedule B to the Customs Tariff, permitting a 99-p.c. drawback on imported coal to be converted into coke for metallurgical purpose, remain in effect, the Government will pay to the manufacturers of iron and steel 49.5 cents per ton on bituminous coal mined in Canada and converted into coke and used by the manufacturer in the smelting in Canada of iron from ore, or in the manufacture in Canada of steel ingots and steel castings. This legislation, which implements one of the recommendations of the Royal Commission on Maritime Claims (1926) is designed to assist the Nova Scotia steel industry and only incidentally affects coal.

Bounties paid under this authority for the years 1952-56 were as follows:—

Item	1953	1953	1954	1955	1956
Quantity..... ton	698,449	773,102	492,196	603,134	654,620
Amount..... \$	345,732	382,685	243,637	298,551	324,037

* Prepared by H. H. Harris, Administrative Officer, Dominion Coal Board, Ottawa. Additional information on subventions and bounties, summarized from the *Report of the Royal Commission on Coal, 1946*, is given in the 1947 Year Book, pp. 770-771.

Section 6.—Control and Sale of Alcoholic Beverages

The retail sale of alcoholic beverages in Canada is controlled by provincial and territorial government liquor control authorities. Alcoholic beverages are sold directly by most of these liquor control authorities to the consumer or to licensees for resale. However, in some provinces beer and wine are sold directly by breweries and wineries to consumers or to licensees for resale. During the year ended Mar. 31, 1956, provincial government liquor control authorities operated 715 retail stores.

Table 6 shows revenue from administration of liquor control by provincial and territorial governments. Details are given in DBS report, *The Control and Sale of Alcoholic Beverages in Canada*.

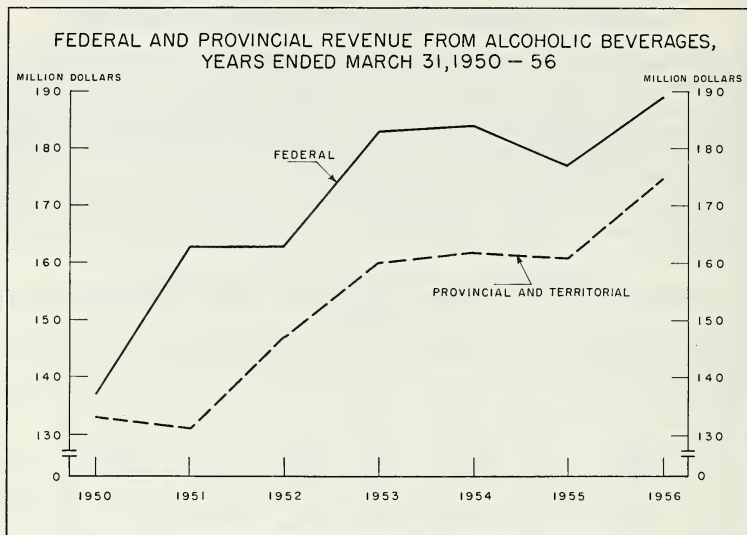
6.—Provincial Revenue from Administration of Liquor Control, Years Ended Mar. 31, 1955 and 1956

NOTE.—Figures include revenue collected directly by the provincial and territorial governments as well as revenue of the liquor authorities, but exclude revenue resulting from a general retail sales tax on alcoholic beverages imposed by five provinces.

Province or Territory	Net Income from Sales ¹	Sales Tax	Licences and Permits ²	Fines and Confiscations ²	Commission on General Sales Tax Collections	Total
	\$	\$	\$	\$	\$	\$
1955						
Newfoundland.....	2,104,834	...	1,005,898 ³	16,555	3,312	3,130,599
Prince Edward Island.....	888,152	272,987	26,072	15,716	...	1,202,927
Nova Scotia.....	9,547,746	...	279,817	86,222	...	9,913,785
New Brunswick.....	6,288,563	...	15,022	15,667	15,956	6,335,208
Quebec.....	22,493,418	1,553,015	11,548,703	238,922	34,556	35,868,614
Ontario.....	33,443,665	...	14,510,304	111,755	...	48,065,724
Manitoba.....	6,116,934	...	2,113,449	80,800	...	8,311,183
Saskatchewan.....	10,236,351	...	53,125	81,363	45,084	10,415,924
Alberta.....	14,317,037	...	858,708	191,156	...	15,366,901
British Columbia.....	20,968,699	...	213,467	...	80,471	21,262,637
Yukon Territory.....	701,860	75,950	7,300	7,319	...	792,429
Northwest Territories.....	263,406	...	4,367	608	...	268,381
Canada, 1955.....	127,370,665	1,961,952	30,636,233	846,053	179,379	160,934,312
1956						
Newfoundland.....	1,979,476	...	1,244,848 ³	20,065	3,566	3,247,955
Prince Edward Island.....	880,369	275,550	29,760	14,522	...	1,200,201
Nova Scotia.....	10,247,881	...	281,519	58,391	...	10,587,791
New Brunswick.....	7,017,419	...	14,848	22,092	17,731	7,072,060
Quebec.....	25,047,090	1,723,043	12,510,689	223,144	35,334	39,539,300
Ontario.....	38,559,862	...	15,026,761	108,380	...	53,695,003
Manitoba.....	6,565,402	...	2,185,918	83,210	...	8,834,530
Saskatchewan.....	10,085,031	...	53,328	76,513	44,249	10,259,121
Alberta.....	15,085,287	...	973,195	201,449	...	16,259,931
British Columbia.....	22,373,721	...	358,048	...	87,300	22,819,075
Yukon Territory.....	774,287 ⁴	74,111	7,537	5,212	...	861,147
Northwest Territories.....	363,691	...	23,467	555	...	387,713
Canada, 1956.....	138,979,516	2,072,704	32,709,918	813,533	188,186	174,763,857

¹ After provision for depreciation on fixed assets or for capital expenditure met out of operating income. ² Before deducting any payments to municipalities out of liquor control authority revenue. ³ Includes \$931,884 in 1955 and \$1,164,255 in 1956 commission on beer sold direct from local provincial breweries to public through licensed outlets under controlled price.

⁴ Includes \$30,720 applicable to previous year as a result of change in inventory valuation as at Mar. 31, 1955.



Specified revenue of the Government of Canada from alcoholic beverages comprising excise duties, excise taxes, customs duties and certain fees and licences in that connection are shown in Table 7. Federal Government revenues from the general sales tax on alcoholic beverages are not available.

**7.—Specified Revenue of the Federal Government from Alcoholic Beverages,
Years Ended Mar. 31, 1953-56**

NOTE.—Figures exclude revenue from the 10-p.c. general sales tax which is not available by commodities.

Nature of Levy	1953	1954	1955	1956
	\$	\$	\$	\$
On Spirits.....	94,186,963	97,255,877	99,578,038	104,546,463
Excise duty ¹	41,058,349	49,503,239	56,281,510	61,170,329
Validation fees.....	746,877	...	...	...
Licences.....	7,750	7,500	8,000	6,500
Import duty.....	52,373,987	47,745,138	43,288,528	43,369,634
On Malt and Malt Products.....	85,996,795	83,656,336	73,948,851	80,880,028
Excise duty on—				
Beer.....	5,294,283 ²	4,799,823 ²	72,676,282 ²	80,742,806
Malt.....	80,584,283	78,733,288	1,151,032 ²	...
Beer licence.....	3,600	3,350	3,450	3,500
Import duty on beer.....	114,629	119,875	118,088	133,722
On Wine.....	3,095,441	3,216,033	3,435,853	3,643,584
Excise taxes.....	2,215,540	2,230,673	2,354,267	2,485,760
Import duty.....	879,901	985,360	1,081,586	1,157,824
Totals.....	183,279,199	184,128,246	176,962,742	189,070,075

¹ Collections on liquor imported for blending purposes are included with import duty.
malt beer.

² Excise duty on malt abolished Apr. 7, 1954.

² Other than

Value of Sales of Alcoholic Beverages.—The figures in Table 8 do not always represent the final retail selling price of alcoholic beverages to the consumer because, when sold to licensees, only the selling price to the licensee is known.

8.—Value of Sales of Alcoholic Beverages, Years Ended Mar. 31, 1955 and 1956

Province or Territory	Spirits		Wines		Beer		Total	
	1955	1956	1955	1956	1955	1956	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	4,029	4,345	364	373	7,825	8,485	12,218	13,203
Prince Edward Island.....	1,922	1,956	156	158	925	917	3,003	3,031
Nova Scotia.....	13,087	13,699	2,103	2,343	11,593	11,893	26,783	27,935
New Brunswick.....	8,685	9,396	1,571	1,711	7,479	8,602	17,735	19,709
Quebec.....	60,919	67,058	9,509	10,377	86,190	94,086	156,618	171,521
Ontario.....	106,528	115,447	12,612	13,318	139,506	149,920	258,646	278,685
Manitoba.....	14,112	14,423	1,605	1,607	17,333	21,383	33,050	37,413
Saskatchewan.....	13,691	13,443	1,931	1,913	20,025	19,617	35,647	34,973
Alberta.....	24,167	25,780	2,127	2,255	26,419	26,735	52,713	54,770
British Columbia.....	41,335	44,668	3,481	3,653	28,231	31,076	73,047	79,397
Yukon.....	1,110	1,000	59	72	883	858	2,052	1,990
Northwest Territories.....	406	558	31	43	298	349	735	950
Canada.....	289,991	311,833	35,549	37,823	346,707	373,921	672,247	723,577

PART III.—BANKRUPTCIES AND COMMERCIAL FAILURES

The three Sections of this Part, although closely related as far as subject matter is concerned, cover different aspects of the field of bankruptcies and commercial failures; thus the statistics presented in each Section are not comparable with those given in the other Sections.

Section 1 is limited to the administration of bankrupt estates by the Superintendent of Bankruptcy under the Bankruptcy Act (including the Farmers' Creditors Arrangement Act). This Section, however, gives definite information on the amounts realized from the assets as established by debtors and indicates that values actually paid to creditors are invariably very much lower than such estimates alone would imply. It can therefore be assumed that this applies in even greater degree to the more extended fields covered in Sections 2 and 3.

Section 2 is limited to bankruptcies and insolvencies made under federal legislation (the Bankruptcy Act and the Winding-Up Act), but does not include failures, sales or seizures carried out apart from such federal legislation. The Dominion Bureau of Statistics coverage has been revised back to January 1955 to include business failures only (*see* p. 980). The figures of assets and liabilities are estimates made by the debtor and because they are not made uniformly should be accepted with reservations.

The statistics given in Section 3 are compiled by Dun and Bradstreet, Incorporated. This mercantile agency is interested primarily in credit information and its statistics include bankruptcies in general, insolvencies under provincial companies' Acts and such proceedings as bulk sales, bailiff's sales, landlord's seizures, etc., when loss to creditors results. On the other hand, the statistics do not include assignments of individuals, so that as a rule the totals run lower than those in Section 2. Because this agency was the only source of figures of commercial failures between the years 1875 and 1919, its statistics have an added value since they present a historical series from 1915, although the basis of classification was changed after 1933 (*see* text preceding Table 6, p. 984).

Section 1.—Administration of Bankrupt Estates*

Federal insolvency legislation now comprises the Bankruptcy Act 1949 (R.S.C. 1952, c. 14), the Farmers' Creditors Arrangement Act 1943 (R.S.C. 1952, c. 111), the Companies' Creditors Arrangement Act and to some extent the Winding-Up Act. The two Arrangement Acts are designed to avert failure and the statistics in this Section and in Section 2 therefore do not include proposals or arrangements under these Acts. When such proposals or arrangements are rejected by the creditors or fail in their purpose, the proceedings may then come under the Bankruptcy Act, the bankruptcy provisions of the Farmers' Creditors Arrangement Act or, in certain circumstances, the Winding-Up Act. There are no provisions in the Companies' Creditors Arrangement Act for the liquidation or winding-up of insolvent companies.

* Prepared by the Superintendent of Bankruptcy, Ottawa. Early bankruptcy and insolvency legislation is reviewed in the 1952-53 Year Book, pp. 914-915.

1.—Assets, Liabilities, Assets Realized and Cost of Administration under the Bankruptcy Act by Province 1955 and 1956

Year and Province	BANKRUPTCIES UNDER GENERAL PROVISIONS OF THE ACT ¹					
	Estates Closed	Assets Estimated by Debtors	Liabilities Estimated by Debtors	Total Realization	Cost of Administration	Paid to Creditors
	No.	\$	\$	\$	\$	\$
1955						
Newfoundland.....	1	14,020	30,816	5,554	1,920	3,634
Nova Scotia.....	8	66,304	181,218	16,282	5,138	11,144
New Brunswick.....	16	196,170	322,195	72,827	20,687	52,140
Prince Edward Island.....	3	52,961	57,459	23,721	2,904	20,817
Quebec.....	1,002	12,252,465	22,822,945	3,213,619	1,091,135	2,122,484
Ontario.....	295	5,441,485	8,510,979	1,273,823	404,963	868,860
Manitoba.....	17	560,293	752,241	125,863	35,939	89,924
Saskatchewan.....	18	171,574	275,497	51,884	11,533	40,351
Alberta.....	20	370,889	455,797	157,920	34,352	123,568
British Columbia.....	54	878,109	1,430,628	240,356	77,603	162,753
Totals, 1955.....	1,434	20,004,270	34,839,775	5,181,849	1,686,174	3,495,675²
1956						
Newfoundland.....	3	57,062	98,560	18,125	3,701	14,424
Nova Scotia.....	13	221,948	554,301	68,437	16,606	51,831
New Brunswick.....	8	167,281	194,754	55,549	8,627	46,922
Prince Edward Island.....	2	56,444	69,185	5,571	1,427	4,144
Quebec.....	603	6,175,812	12,143,071	1,851,319	711,873	1,139,446
Ontario.....	232	3,530,162	6,586,139	1,040,150	318,215	721,935
Manitoba.....	16	286,517	506,337	59,747	18,244	41,503
Saskatchewan.....	28	605,716	730,434	114,183	28,938	85,245
Alberta.....	14	172,292	243,132	66,683	13,207	53,476
British Columbia.....	34	970,981	1,424,453	277,019	67,510	209,509
Totals, 1956.....	953	12,244,215	22,550,366	3,556,783	1,188,348	2,368,435²
PROPOSALS UNDER SECTION 27 (1) (a) OF THE ACT						
	Proposals Completed	Unsecured Liabilities as Estimated by Debtors		Paid to Unsecured Creditors		
	No.	\$		\$		
1955						
Newfoundland.....	—	—		—		
Nova Scotia.....	—	—		—		
New Brunswick.....	2	84,038		13,634		
Prince Edward Island.....	1	3,273		1,669		
Quebec.....	63	1,954,926		477,004		
Ontario.....	8	757,868		115,968		
Manitoba.....	—	—		—		
Saskatchewan.....	1	6,006		2,579		
Alberta.....	1	9,471		2,602		
British Columbia.....	—	—		—		
Totals, 1955.....	76	2,815,582		613,456		

1.—Assets, Liabilities, Assets Realized and Cost of Administration under the Bankruptcy Act by Province 1955 and 1956—concluded

Year and Province	PROPOSALS UNDER SECTION 27 (1) (a) OF THE ACT		
	Proposals Completed	Unsecured Liabilities as Estimated by Debtors	Paid to Unsecured Creditors
1956	No.	\$	\$
Newfoundland.....	—	—	—
Nova Scotia.....	—	—	—
New Brunswick.....	2	148,557	14,409
Prince Edward Island.....	—	—	—
Quebec.....	50	1,597,491	457,799
Ontario.....	10	286,903	64,968
Manitoba.....	—	—	—
Saskatchewan.....	—	—	—
Alberta.....	—	—	—
British Columbia.....	2	49,914	29,112
Totals, 1956.....	64	2,082,865	566,288

¹ Includes summary administration provisions of the Bankruptcy Act.

² In addition to the amount

paid to creditors by the trustee, secured creditors realized direct from their security approximately \$9,771,500 in 1955 and \$4,815,959 in 1956.

The administration of bankrupt estates is supervised by the Superintendent of Bankruptcy (first appointed in 1932) with the object of conserving as far as possible the assets of bankrupt estates for the benefit of the creditors.

Section 2.—Returns under the Bankruptcy and Winding-Up Acts as compiled by the Dominion Bureau of Statistics

The statistics concerning bankruptcies and insolvencies published by the Dominion Bureau of Statistics cover only the failures coming under federal legislation, i.e., the Bankruptcy Act and the Winding-Up Act. Certain documents relating to estates administered under these Acts have, since July 1920, been forwarded to the Dominion Statistician for statistical analysis. The Bankruptcy Act of 1949 altered the administration of bankruptcies by providing for proposals from insolvent persons. Since July 1950, agreements made under this method have not been included with the statistics of bankruptcy, so that subsequent figures are not strictly comparable with those for previous years. In Table 2 the number of proposals for recent years is shown so as to give a general impression of the trend.

Recently, a major revision has been made in the compilation and presentation of commercial failures statistics by the Dominion Bureau of Statistics. Previously, although these statistics covered only failures coming under federal legislation, they included assignments of individuals. The coverage of the revised series has been limited to business failures only, excluding failures of individuals such as wage-earners, salesmen and executive personnel. This revision was extended back to January 1955.

Failures of wage-earners (which are not classed as commercial failures in the revised DBS statistics) rose substantially to 973 in 1956 as compared with 657 in 1955. Most of the wage-earner failures occurred in Quebec in both years, the total for that Province in 1956 being 950.

In Table 2, bankruptcies and insolvencies for the year 1955 are given on both the old and the new bases, so as to show the extent to which the series has been altered. This practice is also followed in Tables 3 and 4.

The disparity in the number of cases closed in 1956 as compared with 1955 results from the fact that a change in the policy previously applied was made with effect from Jan. 1, 1956. Instead of considering, as heretofore, an estate closed upon the receipt

of the trustees final statement, the matter was considered as remaining under administration until discharge was granted by the court.

Three estates were reported during 1955 and one in 1956 under the provisions of the Farmers' Creditors Arrangement Act. Of the cases under administration at the inception of each year, two were completed in 1955 and two in 1956.

2.—Bankruptcies and Insolvencies under Federal Legislation by Province 1947-56

NOTE.—Figures from 1923 are given in the corresponding table of previous Year Books beginning with the 1941 edition.

Year	Atlantic Provinces ¹	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.
1947.....	15	422	72	4	2	6	24	545
1948.....	23	613	116	8	4	8	41	813
1949.....	19	827	131	16	5	13	55	1,066
1950.....	48	967	186	16	9	16	61	1,303
1951.....	44	1,022	227	15	13	14	64	1,399
1952.....	40	1,167	220	13	8	13	48	1,509
1953.....	30	1,221	255	27	19	33	72	1,657
1954.....	45	1,645	414	27	30	44	73	2,278
1955.....	37	1,789	436	27	39	44	76	2,448
1955 ²	36	1,180	406	27	37	42	67	1,795
1956.....	37	1,265	507	23	34	41	59	1,966
Proposals—								
1950.....	2	66	7	1	—	—	3	79
1951.....	4	160	8	—	—	—	4	176
1952.....	1	172	15	—	—	—	3	191
1953.....	—	158	9	2	—	1	1	171
1954.....	1	416	29	4	1	1	4	456
1955.....	7	466	36	2	—	1	5	518
1956.....	9	738	49	2	—	—	14	812

¹ Newfoundland included from 1950.

² New series not strictly comparable with previous figures; see text on p. 981.

3.—Bankruptcies and Insolvencies under Federal Legislation by Branch of Business 1947-56

NOTE.—Figures from 1924 are given in the corresponding table of previous Year Books beginning with the 1942 edition.

Year	Agriculture	Forestry, Fishing and Trapping	Mining	Manu- fac- turing	Con- struc- tion	Transpor- tation, Communi- cations and Storage	Trade	Finance and Public Utilities	Service	Not Classi- fied	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1947.....	6	7	—	152	57	20	153	5	92	53	545
1948.....	9	4	3	188	77	30	289	4	144	65	813
1949.....	8	10	10	232	94	46	374	19	202	70	1,066
1950 ¹	24	7	5	257	97	40	502	20	273	78	1,303
1951.....	20	8	8	269	126	42	570	27	255	74	1,399
1952.....	42	2	7	305	114	45	569	32	279	114	1,509
1953.....	37	6	10	359	124	52	650	30	286	103	1,657
1954.....	48	17	15	416	135	67	973	41	408	158	2,278
1955.....	52	8	8	305	287	116	882	44	454	292	2,448
1955 ²	59	3	4	290	309	68	772	14	250	26	1,795
1956.....	45	10	3	341	375	83	781	28	244	56	1,966

¹ Newfoundland included from 1950.

² New series not strictly comparable with previous years; see text on p. 981.

4.—Estimated Liabilities of Bankruptcies and Insolvencies 1947-56

Year	Atlantic Provinces ¹	Quebec	Ontario	Prairie Provinces	British Columbia	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1947.....	177	6,954	1,963	257	726	10,078
1948.....	331	10,622	2,728	431	1,612	15,724
1949.....	189	12,842	5,222	1,117	1,985	21,356
1950.....	1,211	16,065	4,700	1,127	1,769	24,872
1951.....	947	15,958	5,919	729	2,359	25,912
1952.....	831	20,249	6,653	621	1,304	29,658
1953.....	1,692	18,022	8,270	2,841	1,993	32,818
1954.....	1,029	30,825	15,036	4,675	1,577	53,142
1955.....	1,855	33,927	16,324	4,196	2,837	59,138
1955 ²	2,248	28,746	16,299	3,939	2,548	53,776
1956.....	2,049	29,641	21,836	5,268	2,431	61,230

¹ Newfoundland included from 1950.
text on p. 981.

² New series not strictly comparable with previous years; see

5.—Bankruptcies and Insolvencies by Industries and Economic Areas 1956 with Totals and Liabilities for 1955 and 1956

Industry	1956					Totals		Total Liabilities	
	At- lantic Pro- vinces	Que- bec	Ont- ario	Prairie Pro- vinces	British Colum- bia				
	No.	No.	No.	No.	No.	1956 No.	1955 No.	1956 \$'000	1955 \$'000
Agriculture	—	35	8	2	—	45	59	597	613
Forestry, Fishing and Trapping	—	5	3	—	2	10	3	190	29
Mining	—	2	—	1	—	3	4	81	528
Manufacturing	7	234	81	10	9	341	290	15,078	14,684
Foods and beverages.....	2	23	10	2	—	27	15	1,466	207
Textiles.....	—	1	1	—	—	3	11	57	1,105
Clothing.....	—	35	6	1	—	42	53	1,054	4,072
Wood products.....	3	31	10	1	4	49	50	2,922	2,665
Paper products and printing trades.....	—	23	4	—	—	27	13	775	221
Iron and steel and transportation equipment.....	2	74	26	5	3	110	98	3,472	3,886
Electrical apparatus and non- ferrous metals.....	—	20	13	—	1	34	13	3,418	291
Chemical products.....	—	2	—	—	—	2	6	36	361
Other industries.....	—	25	11	1	1	38	31	1,877	1,276
Construction	4	209	129	17	16	375	309	16,772	9,651
General contractors.....	3	111	62	5	6	187	148	10,457	6,731
Special trade contractors.....	1	98	67	12	10	188	161	6,314	2,921
Transportation, Communica- tions and Storage	2	54	20	3	4	83	68	1,035	1,408
Trade	19	480	211	49	22	781	772	20,453	21,551
Food.....	3	120	45	3	3	174	175	3,047	4,172
General merchandise.....	6	32	9	9	4	60	43	1,509	1,337
Automotive products.....	2	14	19	5	—	40	41	1,679	2,707
Filling stations.....	—	12	10	2	1	25	24	203	359
Clothing.....	—	57	31	4	1	93	106	1,377	2,670
Shoes.....	—	6	2	—	—	8	17	226	255
Hardware and building materials	2	26	19	7	3	57	54	1,826	2,311
Furniture, appliances and radios.	3	62	38	13	9	125	93	5,504	2,981
Fuel.....	1	13	1	—	—	15	12	286	347
Drugs.....	1	8	3	1	—	13	10	230	146
Jewellery.....	—	9	4	2	—	15	27	272	569
Other.....	1	121	30	3	1	156	170	4,297	3,696

5.—Bankruptcies and Insolvencies by Industries and Economic Areas 1956 with Totals and Liabilities for 1955 and 1956—concluded

Industry	1956					Totals		Total Liabilities	
	At- lantic Pro- vinces	Que- bec	Ont- ario	Prairie Pro- vinces	British Colum- bia	1956	1955	1956	1955
	No.	No.	No.	No.	No.			\$'000	\$'000
Finance and Public Utilities.....	1	23	3	—	1	28	14	1,042	205
Service.....	2	184	46	11	1	244	250	4,951	4,641
Community.....	—	15	—	1	—	16	10	907	91
Recreational.....	—	11	4	—	—	15	15	592	357
Business.....	—	17	5	1	—	23	32	766	485
Personal.....	2	141	37	9	1	190	193	2,686	3,708
Not Classified.....	2	39	6	5	4	56	26	1,030	466
Totals.....	37	1,265	507	98	59	1,966	1,795	61,230	53,776

Section 3.—Statistics of Industrial and Commercial Failures from Private Sources

A table showing commercial failures by class for the years 1915 to 1935 (and for Newfoundland for 1915 to 1932) is given in the 1936 Year Book, p. 969. In 1936 Dun and Bradstreet, Incorporated, from whose reports these figures were taken, adopted a new method of classification. The principal changes consisted of setting up a new group of construction enterprises previously included in manufacturing, and a new class for commercial service. Real estate companies, holding and other financial companies, and agents of various kinds were omitted. These changes had the effect of confining the failure records more to industrial and commercial lines of activity, and liabilities were reduced more in proportion to the number of failures, since the companies eliminated usually ran high in indebtedness. This series extends back to 1934.

6.—Industrial and Commercial Failures by Class 1950-56 and by Province 1955 and 1956

(Source: Dun and Bradstreet, Incorporated)

NOTE.—Figures from 1934 are given in the corresponding table of previous Year Books beginning with the 1937 edition.

Year and Province	Manu- facturing		Wholesale Trade		Retail Trade		Con- struction		Commercial Service		Totals	
	No.	Lia- bilities	No.	Lia- bilities	No.	Lia- bilities	No.	Lia- bilities	No.	Lia- bilities	No.	Lia- bilities
		\$'000		\$'000		\$'000		\$'000		\$'000		\$'000
1950.....	159	6,479	70	1,746	349	4,347	89	1,415	50	1,405	717	15,392
1951.....	174	6,409	72	2,892	387	5,693	116	2,560	48	1,494	797	19,048
1952.....	205	7,787	73	2,285	418	6,885	106	2,196	41	670	843	19,823
1953.....	185	8,943	85	3,605	568	11,779	142	4,477	59	1,500	1,039	30,304
1954.....	266	21,597	138	4,394	688	15,002	199	9,030	90	1,994	1,381	52,017
1955												
Newfoundland.....	—	—	2	161	10	476	1	10	2	133	15	780
P. E. Island.....	—	—	1	468	2	46	—	—	1	5	4	519
Nova Scotia.....	1	94	—	—	3	326	2	264	—	—	4	684
New Brunswick.....	2	133	—	—	7	269	5	408	—	—	14	810
Quebec.....	119	3,593	77	2,642	390	8,137	130	2,782	71	1,517	787	18,671
Ontario.....	62	2,452	31	885	173	3,948	77	2,800	25	618	368	10,703
Manitoba.....	8	177	7	370	18	471	5	448	1	12	39	1,478
Saskatchewan.....	4	482	2	25	15	392	4	466	4	39	29	1,404
Alberta.....	3	178	—	—	8	313	1	15	2	105	14	611
British Columbia.....	13	910	5	85	47	848	8	271	3	374	76	2,488
Totals, 1955.....	212	8,019	125	4,636	673	15,226	233	7,464	109	2,803	1,352	38,148

**6.—Industrial and Commercial Failures by Class 1950-56 and by Province
1955 and 1956—concluded**

Year and Province	Manu- facturing		Wholesale Trade		Retail Trade		Con- struction		Commercial Service		Totals	
	No.	Lia- bilities	No.	Lia- bilities	No.	Lia- bilities	No.	Lia- bilities	No.	Lia- bilities	No.	Lia- bilities
		\$'000		\$'000		\$'000		\$'000		\$'000		\$'000
1956												
Newfoundland.....	1	14	2	79	7	582	1	55	1	50	12	780
P. E. Island.....	—	—	—	—	2	20	—	—	—	—	2	20
Nova Scotia.....	—	—	2	205	3	141	1	22	—	—	6	368
New Brunswick....	1	4	2	202	11	377	1	29	2	119	17	731
Quebec.....	114	4,637	53	2,913	345	5,896	125	4,336	54	1,111	691	18,893
Ontario.....	69	10,115	42	1,598	191	5,009	114	5,809	36	753	452	23,284
Manitoba.....	6	215	4	183	26	477	8	2,392	1	9	45	3,276
Saskatchewan.....	—	—	—	—	17	318	2	388	—	—	19	706
Alberta.....	—	—	—	—	11	279	5	459	—	—	16	738
British Columbia...	11	818	3	228	24	1,060	13	627	9	149	60	2,882
Totals, 1956.....	202	15,803	108	5,408	637	14,159	270	14,117	103	2,191	1,320	51,678

In 1955 and 1956, Quebec accounted for 58 and 52 p.c., respectively, of the total failures and 49 and 37 p.c., respectively, of the liabilities; Ontario had 27 and 34 p.c. of the failures and 28 and 45 p.c. of the liabilities in the same period. In 1955 and 1956 failures in the retail trade group accounted for almost one-half of the total.

7.—Industrial and Commercial Failures by Industrial Group 1954-56

(Source: Dun and Bradstreet, Incorporated)

NOTE.—Comparable figures from 1934 are given in the corresponding table of previous Year Books beginning with the 1937 edition.

Industrial Group	Failures			Liabilities		
	1954	1955	1956	1954	1955	1956
	No.	No.	No.	\$ '000	\$ '000	\$ '000
Manufacturing.....	266	212	202	21,597	8,019	15,803
Foods.....	26	12	16	1,014	260	589
Textiles.....	83	77	39	7,320	3,218	3,563
Forest products.....	58	37	48	3,736	1,506	3,448
Paper, printing and publishing.....	12	14	16	372	216	501
Chemicals and drugs.....	6	3	2	138	157	29
Fuels.....	6	3	1	814	119	30
Leather and leather products.....	11	10	7	3,051	377	350
Stone, clay, glass and products.....	7	4	7	513	128	260
Iron and steel.....	8	8	15	658	385	1,911
Machinery.....	16	14	14	2,387	671	1,788
Transportation equipment.....	6	4	7	242	165	1,434
All other.....	27	26	30	1,352	817	1,900
Wholesale Trade.....	138	125	108	4,394	4,636	5,408
Farm products, foods, groceries.....	24	31	27	908	1,857	1,377
Clothing and furnishings.....	8	6	6	425	211	112
Dry goods and textiles.....	24	11	6	707	905	242
Lumber, building materials, hardware.....	9	11	12	289	479	1,060
Chemicals and drugs.....	6	4	4	105	—	116
Fuels.....	—	1	—	—	43	—
Automotive products.....	6	5	4	235	89	189
All other.....	61	56	49	1,725	993	2,312

7.—Industrial and Commercial Failures by Industrial Group 1954-56—concluded

Industrial Group	Failures			Liabilities		
	1954	1955	1956	1954	1955	1956
	No.	No.	No.	\$'000	\$'000	\$'000
Retail Trade	688	673	637	15,002	15,226	14,159
Foods.....	121	130	110	1,506	1,660	1,377
Farm supplies, general stores.....	22	24	32	344	702	1,075
General merchandise.....	32	19	19	584	337	553
Apparel.....	116	119	83	2,305	2,496	1,715
Furniture, household furniture.....	116	79	114	3,311	1,998	3,949
Lumber, building materials, hardware.....	33	45	38	739	1,248	1,112
Automotive products.....	109	94	86	3,768	4,283	2,430
Restaurants.....	76	95	100	1,134	1,164	1,171
Drugs.....	10	10	7	78	139	107
All other.....	53	58	48	1,233	1,199	670
Construction	199	233	270	9,030	7,464	14,117
General contractors.....	86	115	129	3,953	3,766	6,372
Carpenters and builders.....	11	10	13	377	102	298
Building sub-contractors.....	97	103	119	3,508	2,923	6,391
Other contractors.....	5	5	9	1,192	673	1,056
Commercial Service	90	109	103	1,994	2,803	2,191
Cleaners and dyers, tailors.....	11	18	13	88	368	177
Haulage, buses, taxis, etc.....	34	34	38	1,027	836	680
Hotels.....	6	17	12	273	541	666
Laundries.....	2	4	7	125	514	188
Undertakers.....	—	3	2	—	72	79
All other.....	37	33	31	481	472	401
Totals	1,381	1,352	1,320	52,017	38,148	51,678

CHAPTER XXII.—FOREIGN TRADE

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

The subject of foreign trade covers more than the treatment of imports and exports of commodities, important though this is. In its broader sense foreign trade is made up of the total international exchanges of goods, services, securities and other financial exchanges, all of which are presented in their proper relationship in this Chapter. Following Part I, which is a review of Canada's trade during recent years, Part II gives detailed statistics of external commodity trade. Part III summarizes external transactions from the standpoint of the balance of international payments. Part IV outlines the various ways in which the Federal Government promotes and encourages trade relationships, and contains a brief review of the Canadian tariff structure.

PART I.—REVIEW OF FOREIGN TRADE*

There has been a marked general increase in international trade in the postwar years, although the rate of growth has not been steady. The prewar volume of trade had been regained by 1948 and there was a sharp value upswing in 1951, caused mainly by the high prices of the Korean boom. A period of readjustment then followed, but by the second half of 1954 economic activity and trade were again generally on the increase. In 1955 the volume of world trade was 18 p.c. higher than the previous record of 1951 and in 1956 was about 10 p.c. higher than in 1955; the increase in value in the latter year was 11 p.c. The rate of increase was fairly constant in the two years, but declined sharply in 1957 so that the relative change in that year was slight. It is interesting to note that while the advance in 1955 kept roughly in line with world production, trade in 1956 increased at a rate almost double that of industrial production. Also of interest in the general development of

* Prepared in the External Trade Section, International Trade Division, Dominion Bureau of Statistics.

trade in 1956 were the continued relative decline of trade between industrial and non-industrial areas and the increased importance of North America in the trade of industrial areas.

In 1956 Canada ranked fourth among the trading nations, while the United States and the United Kingdom retained first and second positions. Canada has been fourth every year since 1954 when the Federal Republic of Germany recovered its prewar strength and took third place among the world's traders. The Canadian share of world trade was about 6 p.c. in 1956, and on a per capita basis this placed Canada first, ahead of Belgium and Luxembourg, as in 1953. In 1954 and 1955, Canada was second to New Zealand.

1.—World Trade by Leading Countries 1955 and 1956

SOURCES: International Monetary Fund, *International Financial Statistics*, September 1957, and United Nations Statistical Office, *Population and Vital Statistics Reports*, Vol. IX, Nos. 2, 3.

Country	1955			1956			Popula- tion mid-1956	Trade per Capita ¹	
	Exports f.o.b.	Imports c.i.f.	Total Trade	Exports f.o.b.	Imports c.i.f.	Total Trade		1955	1956
	U.S. \$ '000,000	U.S. \$ '000,000	U.S. \$ '000,000	U.S. \$ '000,000	U.S. \$ '000,000	U.S. \$ '000,000	'000	U.S. \$	U.S. \$
United States.....	15,553	12,369	27,922	19,081	13,752	32,833	171,237	167 ²	192 ²
United Kingdom.....	8,468	10,867	19,335	9,292	10,890	20,182	51,486	377	392
Germany, Federal Republic.....	6,135	5,793	11,928	7,358	6,617	13,975	53,800	229	260
Canada.....	4,784	5,152	9,936	5,277	6,255	11,532	16,081	633	717
France.....	4,911	4,739	9,650	4,538	5,553	10,091	43,620	218	231
Netherlands.....	2,688	3,208	5,896	2,862	3,712	6,574	10,888	549	604
Belgium and Luxembourg..	2,776	2,830	5,606	3,162	3,272	6,434	9,236	611	697
Japan.....	2,011	2,471	4,482	2,501	3,230	5,731	90,000	50	64
Italy.....	1,856	2,711	4,567	2,157	3,169	5,326	48,223	95	110
Sweden.....	1,726	1,997	3,723	1,945	2,209	4,154	7,316	513	568
Australia.....	1,748	2,160	3,908	1,887	1,937	3,824	9,428	422	406
Venezuela.....	1,912	1,092	3,004	2,124	1,249	3,373	5,949	520	567
World Total³.....	84,177	88,969	173,146	93,335	97,910	191,245	1,855,000	96	103

¹ New Zealand, which ranked first in per capita trade in 1955 and second in 1956, ranks far down on the list in total trade.

² Including military aid extended to other countries.

³ Excludes China, Union of Soviet Socialist Republics, and the communist countries of Eastern Europe (except Yugoslavia).

Canadian Trade in Recent Years.—Following the readjustment of the latter part of 1953 and the beginning of 1954, Canadian trade showed signs of recovery in the second half of 1954. Both imports and exports recovered sharply in 1955 and the value of total trade was a record at 12.7 p.c. above the value of 1954. In 1956 the trend continued upward and reached a value almost 17 p.c. greater than in the previous year. In 1957 trade was again high but was changed little relative to that of 1956.

The value of total exports in 1956 was \$4,860,000,000, 11 p.c. higher than in 1955. The value of imports rose more sharply to \$5,700,000,000 or 21 p.c. above 1955 and thus the import balance increased to \$840,000,000. Although both import and export prices

were higher, about three-quarters of the export and nine-tenths of the import value gains resulted from changes in volume. In 1957 total exports were around \$4,936,000,000, while imports declined slightly to \$5,623,000,000.

At \$840,000,000, the import balance was at its highest ever in 1956 and, in relative terms, represented about 15 p.c. of total imports, almost double the comparable percentage for 1955. This ratio was surpassed only in the early years of the century, most notably in 1910, 1911 and 1912 when the balance ranged from over 30 p.c. to over 40 p.c. of total imports. The explanation of a high level of the import balance is, of course, to be found, as in the early 1900's, in the pattern and pace of economic growth.

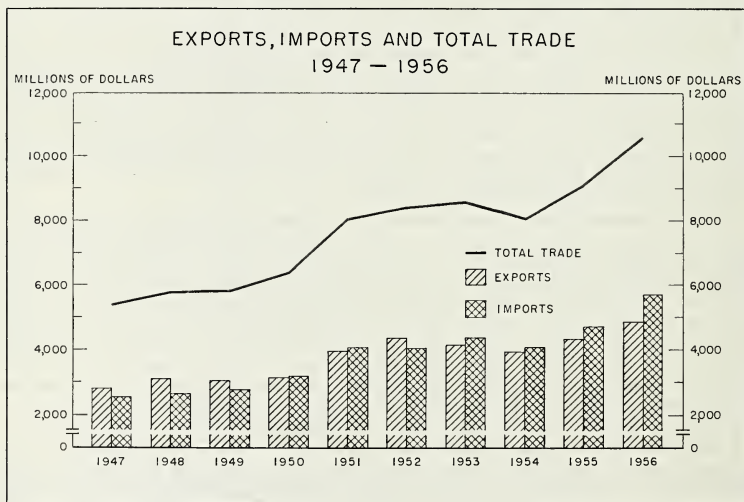
There were general import value gains in 1956 for all main commodity groups and records were set for all but the animal products and textile groups. In 1957, although individual commodities recorded diverse and sometimes fairly sharp movements, the general import changes were moderate compared with those of 1956. The 1956 gains were most marked in the iron and steel group which rose by about 39 p.c., almost doubling the 1955 increase, and thus recorded the largest absolute and relative gain among the major commodity groups. The share of iron and steel products in the import total rose from one-third to two-fifths, and the group accounted for three-fifths of the total import gain. This relates to the fact that the major impetus to domestic expansion came from a 33-p.c. increase in investment in new construction, machinery and equipment. In addition, and notwithstanding the increased relative importance of investment, the rates of growth of both consumer expenditures and exports were maintained and the total supply of goods available in 1956 was more than 12 p.c. higher than in 1955. The high level of demand for iron and steel products, the stable increase in consumer spending and exports, and the relative scarcity of labour and materials made it essential to supplement significantly the total supply of goods and services, and imports provided about one-third of the increase. In 1957 the imports of iron and steel products reflected the levelling off of industrial activity and declined somewhat as compared with 1956. Contrary to the general trend in this group, imports of pipes, tubes and fittings, on account of the extensive pipeline construction activities, rose by over 30 p.c. and displaced both tractors and parts and passenger automobiles in individual commodity ranking.

On the export side, the outstanding feature of 1956 was the strong recovery of wheat sales (partly as a result of poor European crops in the winter of 1955-56 and of unusually large shipments to the Soviet Union and Eastern Europe) which, together with a sharp increase in barley sales, resulted in a 14-p.c. advance for grains and farinaceous products over 1955. The regular European wheat market and the special Soviet market were much softer in 1957 and there was consequently a marked decline in wheat sales and thus in grains as a whole. Wheat itself, notwithstanding the decline, remained in second place among commodity exports, a position it regained in 1956 from planks and boards as a result of a 50-p.c. gain. Newsprint, the leading export commodity in every postwar year except 1949 and 1952 (when wheat was in top place) again ranked first in 1956 and 1957, increasing in value in both years, but more moderately in the latter. Forest products as a whole declined in value in 1956 and 1957, the decrease in 1957 being especially marked for planks and boards which suffered from the decline in housing construction in the United States. In 1956 the values of animals and animal products, and fibres, textiles and products also declined, but all the other commodity groups gained. Record values were established for iron and its products, non-ferrous metals, non-metallic minerals, and chemicals and allied products. In 1957 the major export gains were made by such minerals as petroleum, uranium and nickel, and by cattle and seeds.

The accelerated pace of exploration and development of Canada's natural resources and the increased capacity of other industries during 1955 and 1956 contributed strongly to the greater import demand for machinery and equipment and was also reflected in the upsurge in foreign sales of such 'new' exports as oil, iron ore and uranium. Compared with 1954, the 1956 exports of these three commodities increased by 1,545 p.c., 264 p.c. and 568 p.c., respectively; their respective shares in the export total in 1956 were 2.2 p.c., 3.0 p.c. and 1.0 p.c.

2.—Summary Statistics of Canadian Trade 1952-56

Item	1952	1953	1954	1955	1956	Change	
						1954 to 1955	1955 to 1956
	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000	p. c.	p. c.
Value of Trade—							
Domestic exports	4,301.1	4,117.4	3,881.3	4,281.8	4,789.7	+10.3	+11.9
Re-exports	54.9	55.2	65.6	69.5	73.4	—	—
Imports	4,030.5	4,382.8	4,093.2	4,712.4	5,705.4	+15.1	+21.1
Total Trade	8,386.4	8,555.4	8,040.1	9,063.7	10,568.6	+12.7	+16.6
Trade balance	+325.5	-210.2	-146.3	-361.1	-842.3	—	—
Price Indexes (1948=100)—							
Domestic exports	121.8	118.3	115.1	117.7	121.3	+ 2.3	+ 3.1
Imports	110.4	109.4	109.5	110.5	113.0	+ 0.9	+ 2.3
Volume Indexes (1948=100)—							
Domestic exports	114.9	113.2	109.6	118.3	128.4	+ 7.9	+ 8.5
Imports	138.0	151.0	141.0	160.3	190.0	+13.7	+18.5



The Canadian deficit on visible trade (like that on invisible trade) was financed by a marked upsurge in the net inflow of foreign capital. This upsurge sustained the high demand for the Canadian dollar, which continued to be at a premium over the United States dollar throughout 1956. The Canadian price of the U.S. dollar declined continuously until December when, averaging 96.05 cents, it reached its lowest postwar monthly level since the Canadian dollar was freed from exchange control in October 1950. This development is all the more noteworthy when it is considered that the impressive increase in imports from the United States might have been expected to have had an equilibrating influence on the exchanges.

3.—Price of the United States Dollar in Canada by Month 1950-56

NOTE.—Rates published by Bank of Canada. To Oct. 1, 1950, average (for business days in period) of mid-rate between official buying and selling rates; from Oct. 2, 1950, noon average market rate for business days in period.

(Canadian cents per U.S. dollar)

Month	1950	1951	1952	1953	1954	1955	1956
January.....	110.25	105.17	100.48	97.05	97.29	96.60	99.87
February.....	110.25	104.92	100.10	97.73	96.65	97.69	99.91
March.....	110.25	104.73	99.59	98.33	97.08	98.43	99.87
April.....	110.25	105.99	98.09	98.37	98.25	98.62	99.68
May.....	110.25	106.37	98.38	99.41	98.43	98.59	99.18
June.....	110.25	106.94	97.92	99.44	98.13	98.44	98.53
July.....	110.25	106.05	96.91	99.18	97.44	98.46	98.18
August.....	110.25	105.56	96.11	98.83	97.02	98.51	98.12
September.....	110.25	105.56	95.98	98.43	96.97	98.78	97.77
October.....	105.34	105.08	96.43	98.25	96.98	99.53	97.32
November.....	104.03	104.35	97.66	97.77	96.92	99.94	96.44
December.....	105.31	102.56	97.06	97.31	96.80	99.95	96.05
Annual Average.....	108.92	105.28	97.89	98.34	97.32	98.63	98.41

Changes in the Structure of Trade.*—The direction of Canadian trade in the postwar period has remained reasonably consistent although there have been some changes in relative shares. The United States has long been Canada's leading trading partner and in 1956 accounted for 66.0 p.c. of the total trade (59.0 p.c. of the export total and 73.0 p.c. of the import total). The United Kingdom, in second place, was responsible in 1956 for 16.8 p.c. of Canadian exports and 8.5 p.c. of Canadian imports, while the share of total trade was 12.3 p.c. In 1946 the United States had 55.0 p.c. of Canadian trade against 17.6 p.c. recorded by the United Kingdom; by 1948 the respective figures had become 57.9 p.c. and 17.2 p.c., and in 1955 they were 66.9 p.c. and 13.0 p.c. From 1946 to 1956, the share of the Commonwealth (excluding the United Kingdom) in Canadian trade fell from 9.4 p.c. to 4.5 p.c., whereas the European portion remained more constant, declining from 8.6 p.c. to 7.9 p.c. Latin American trade was even more consistent at just over 5 p.c. in both years.

The nature and volume of any country's international trade are both functions of a complex of factors which vary, more or less, over time. The more important of these factors are the natural endowment of a country, the stage it has reached in its economic development, the number and nature of institutional impediments to trade, and the general condition of the world economy. Canada has always been dependent on trade, but the pattern of trade has changed somewhat with changing circumstances, as is indicated by a comparison of the figures for 1939, 1955 and 1956. In 1939 the level of economic activity represented only a partial recovery on that of 1929, but the comparison is, nonetheless, useful because 1939 is something of a half-way mark in economic change since 1929, and also because it relates directly postwar and prewar conditions.

In 1939 the gross national product stood at \$6,166,000,000 (in current prices) and by 1956 had risen to \$29,866,000,000. Exports of goods and services and gross domestic investment were respectively 25 p.c. and 16 p.c. of the gross national expenditure in the

* Broader discussions of structural changes (in the periods 1926-29, 1936-39, 1946-49 and 1951-54) are given in the *Review of Foreign Trade* for the first half-year 1955, the calendar year 1955, and the first half-year 1956.

former year and 21 p.c. and 25 p.c. in the latter year. Imports of goods and services, in proportion to the total domestic demand for goods and services, remained relatively stable, accounting for 24 p.c. in 1939 and 25 p.c. in 1956. These figures, as a broad measure, suggest that there has been only a slight decline in the place of trade in the Canadian economy; and that the increased importance of investment, coupled with a comparatively stable domestic consumption and level of imports, is reflected in the slight relative decline in exports.

Although the general importance of trade has remained steady, there have been some significant changes that reflect developments in the domestic economy and changes in the pattern of world trade. Most of these changes represent a steady continuation of trends that had been evident in the period from 1929, but several represent quite sharp accentuations of earlier trends. On the average, in the years 1936 to 1939, 38.4 p.c. of Canada's domestic exports originated on the farms. By 1955 the relative share of farm produce had fallen to 20.3 p.c. and although the figure was somewhat higher in 1956 at 22.7 p.c. it was still markedly below the average of 1936-39. Behind this decline was the decrease in the importance of wheat which had earlier been the leading export commodity and which had accounted for about 50 p.c. of the export total. It should, however, be remembered that the decline in wheat is but relative—in 1939 a total of 163,000,000 bu. of wheat were exported at a value of \$109,000,000 whereas in 1956, 302,000,000 bu. were exported at a value of \$513,000,000—and that the main reason for the decline is simply that the world and Canada were trading more widely in other commodities in 1956 than they were in 1939.

Contrary to the trend in products of farm origin, products in the forest and mineral origin groups have shown relative gains—those of the former being more sharp between 1936-39 and 1956 than between 1926-29 and 1936-39. Forest products in 1936-39 accounted for 24.7 p.c. of total domestic exports, whereas in 1955 the share had risen to 35.5 p.c., as against 31.6 p.c. in 1956. Mineral products, standing at 29.1 p.c. in 1936-39, moved upwards to 35.3 p.c. in 1955 and still further to 36.7 p.c. in 1956. The changed standing of forest products—part of which is attributable to relatively greater price increases—reflects the increased importance of newsprint which from 1951 to 1954 averaged 14 p.c. of total exports and replaced wheat as the leading export commodity. The changed standing of newsprint is the result of the increasing size of newspapers, the greater allocation of space to advertising, and the absence of a U.S. tariff. The growth of mineral products reflects the increased diversification of the Canadian economy and technological progress. Non-ferrous metals and products, which in 1926-29 accounted for only 7.4 p.c. of the domestic export total, had by 1951-54 increased its proportionate share to 16.5 p.c.—a development resulting partly from the very marked development in the Canadian aluminum industry.

On the whole, the import pattern has been more consistent than that of exports although, here too, significant changes have been recorded in commodities of farm and mineral origin. Farm commodities contributed 34.8 p.c. of the import total in 1936-39 but only 18.5 p.c. in 1956, while the share of commodities of mineral origin increased from 49.8 p.c. in 1936-39 to 58.5 p.c. in 1955 and 62.8 p.c. in 1956. This increase stems from the fact that 1955 and 1956 were years of very marked economic growth, with consequently a high demand for capital goods and structural materials. Historically, manufactured goods have always played a large part in Canadian imports, but there is, nevertheless, significance in the increased share of the import total shown by the chiefly manufactured products group which advanced from 62.2 p.c. in 1936-39 to 77.1 p.c. in 1956. Although Canada has moved from the position of being predominantly a primary producer, it has not thereby become an overwhelmingly industrial country in the sense that the United Kingdom is an industrial country. The share of raw materials in the domestic export total fell from 46.7 p.c. in 1926-29 to 32.2 p.c. in 1936-39 but has been reasonably consistent since; and while wheat is no longer in a position of relative pre-eminence, Canada's farms and forests were still, in 1956, the origin of 54.3 p.c. of the total domestic exports.

4.—Trade of Canada by Industrial Origin, Annual Averages for Certain Periods 1926-56
(Millions of dollars)

Origin Group	Domestic Exports					Imports				
	Calendar Years					Calendar Years				
	1926-29	1936-39	1946-49	1951-54	1955	1926-29	1936-39	1946-49	1951-54	1955
Farm Origin	712.7	340.3	942.5	1,143.6	870.4	1,088.3	234.5	639.4	922.7	959.6
Raw materials	501.2	203.9	551.9	850.6	603.5	808.1	95.0	279.2	403.7	444.7
Partly manufactured	10.6	8.4	16.4	19.5	21.9	22.7	63.0	104.0	126.5	117.1
Chiefly manufactured	201.0	128.1	374.2	273.5	244.9	257.5	98.0	316.2	392.4	433.2
Wild Life Origin	22.7	16.3	27.3	25.3	30.3	27.8	12.7	9.6	11.4	14.6
Raw materials	22.4	15.5	26.3	24.1	28.4	26.0	10.3	7.5	8.8	11.4
Partly manufactured	0.2	0.6	0.5	0.7	1.5	1.3	2.0	1.3	1.5	2.4
Chiefly manufactured	0.1	0.1	0.5	0.6	0.4	0.5	0.4	0.8	1.1	0.8
Marine Origin	36.9	27.2	90.6	121.5	128.1	132.7	3.5	10.2	10.7	14.3
Raw materials	11.3	11.6	43.8	70.5	76.1	80.4	1.1	3.2	3.3	4.2
Partly manufactured	—	—	0.3	0.6	0.7	0.6	—	—	—	—
Chiefly manufactured	25.6	15.7	46.6	50.3	51.3	51.7	2.4	7.1	7.3	10.1
Forest Origin	284.2	248.6	835.6	1,360.0	1,521.4	1,514.6	32.0	84.5	153.3	200.4
Raw materials	23.5	16.5	52.0	75.8	65.4	66.8	0.6	2.8	6.6	10.2
Partly manufactured	110.9	74.5	367.2	624.2	718.3	666.9	13.8	16.5	31.0	41.7
Chiefly manufactured	149.8	127.5	416.4	659.9	737.8	780.8	36.9	65.3	115.8	148.6
Mineral Origin	194.8	257.3	720.2	1,204.8 ²	1,509.4 ²	1,758.1 ²	483.2	1,406.0	2,449.6	3,581.0
Raw materials	38.0	37.9	83.8	216.7 ²	378.5 ²	529.6 ²	90.5	346.8	444.0	432.5
Partly manufactured	66.0	137.7	311.0	565.8	772.3	857.4	18.4	40.3	69.9	73.6
Chiefly manufactured	90.8	81.7	325.4	392.3	358.6	371.0	356.8	1,018.9	1,935.7	2,249.3
Mixed Origin	25.0	27.1	172.7	198.3 ²	222.0 ²	268.2 ²	92.3	265.1	600.1	768.2
Raw materials	—	—	—	1.0	2.6	1.8	—	—	0.1	0.2
Partly manufactured	1.6	0.8	0.2	0.5	0.6	0.9	4.2	6.7	11.2	10.2
Chiefly manufactured	23.4	26.3	172.5	196.8 ²	218.8 ²	265.5 ²	88.1	258.3	588.8	757.8
Totals	1,276.3	886.7	2,788.9	4,633.6	4,281.8	4,789.7	1,083.2	2,474.8	4,147.8	5,705.4
Raw materials	596.4	285.4	757.7	1,238.8 ²	1,154.6 ²	1,512.8 ²	190.2	639.5	867.7	997.0
Partly manufactured	189.2	221.9	695.6	1,241.4	1,545.2	1,549.8	64.3	168.7	240.2	311.1
Chiefly manufactured	490.6	379.4	1,335.5	1,573.4 ²	1,642.0 ²	1,727.1 ²	418.5	1,666.6	3,041.1	4,397.4

¹ Less than \$500,000.

² Revised to include transfer of uranium ores and concentrates from mined origin to mineral origin which were: \$8,056,000 in 1954; \$26,533,000 in 1955; and \$45,777,000 in 1956.

PART II.—FOREIGN TRADE STATISTICS*

Section 1.—Explanations *re* Canadian Trade Statistics

Certain problems of procedure arise in recording trade statistics and require explanation. For the correct interpretation of the statistics of foreign trade, it is necessary that the following definitions and explanations of terms used be kept in mind:—

Quantities and Values.—In all tables of imports and exports the quantities and values are based upon the declarations of importers (import entries) and exporters (export entries), as subsequently checked by customs officials.

Imports: Valuation.—“Imports” means imports entered for consumption. “Entered for consumption” does not necessarily imply that the goods have been actually consumed in Canada but that they have passed into the possession of the importer and that duty has been paid on that portion liable for duty.

Under the main provisions of the law, the value of merchandise imported into Canada is the fair market value or price thereof when sold for home consumption in the principal markets of the country from which said merchandise was exported. (*See* Sects. 35 to 45 and 55 of the Customs Act.)

Canadian Exports: Valuation.—“Canadian produce” exported (domestic exports) includes Canadian products or manufactures, also exports of commodities of foreign origin that have been changed in form or enhanced in value by further manufacture in Canada, such as sugar refined in Canada from imported raw sugar, aluminum extracted from imported ore, and articles constructed or manufactured from imported materials. The value of exports of Canadian merchandise is the actual amount received in Canadian dollars exclusive of freight, insurance and other handling charges.

Foreign Exports: Valuation.—“Foreign produce” exported (re-exports) consists of foreign merchandise that has previously been imported (entered for home consumption) and is exported from Canada unchanged in form. The value of such commodities is the actual amount received in Canadian dollars exclusive of freight, insurance and other handling charges.

Countries to which Trade is Credited.—Imports are classified as received from the countries whence they were consigned to Canada. These countries are not necessarily the countries of actual origin of the goods, since goods produced in one country may be imported by a firm in another country and later re-sold to Canada. In such cases the second country would be the country of consignment to which the goods would be credited.

There is one exception to this rule. An attempt is made to classify by country of actual origin imports produced in Central and South America but consigned to Canada from the United States. The effect of this procedure, which has been in force since 1946, is to reduce slightly the imports credited to the United States and to increase those credited to Central and South American countries. (*See* Table 5.)

Exports are always credited to the country to which they are consigned.

Discrepancies in Trade Statistics between Canada and Other Countries.—Canada’s statistics of exports are rarely in exact agreement with the import statistics of its customers and parallel differences occur with Canadian imports. Among the chief factors contributing to these discrepancies are:—

- (1) Differences in the system of valuation used by Canada and those of other countries, especially with respect to the treatment of transportation charges.
- (2) Differences in the statistical treatment of special categories of trade, such as armaments and military supplies, government-financed gift or mutual aid shipments, postal and express shipments, or warehouse trade.
- (3) Differing definitions of territorial areas.
- (4) Differing systems of geographical classification of trade, notably the consignment system used by Canada and the actual origin or ultimate destination system in use by some other countries.
- (5) Differences in the time at which trade is recorded in the statistics of partner countries caused by the time required for goods to move from one country to another.

Treatment of Gold in Trade Statistics.—The general use of gold as a money metal gives it peculiar attributes that distinguish it from other commodities in trade. In particular, international movements of gold are determined largely by monetary factors

* Based on statistics taken from reports published by the External Trade Section, International Trade Division, Dominion Bureau of Statistics.

rather than by ordinary trade or commercial considerations. Gold is generally acceptable; it does not have to surmount tariff barriers and is normally assured a market at a fixed minimum price. Also, gold may be bought or sold internationally without any physical movements of the metal, such transactions being recognized by simply setting aside or 'ear-marking' the metal in the vaults of some central bank.

For these reasons movements of gold in a primary or semi-fabricated state are excluded from the statistics of Canada's commodity trade. However, since gold is produced in Canada primarily as an export commodity, a series showing new gold production available for export is published as a supplement to the trade statistics. Because this series is calculated on a production basis, a division of the figures into transactions with individual countries is not possible.

NEW GOLD PRODUCTION AVAILABLE FOR EXPORT BY MONTH 1949-56

(Millions of dollars)

Month	1949	1950	1951	1952	1953	1954	1955	1956
January.....	9.7	15.8	17.3	13.3	16.0	11.5	11.5	12.5
February.....	9.6	11.7	11.7	13.0	16.1	10.2	14.7	12.7
March.....	12.1	13.5	8.4	15.0	15.6	12.8	12.2	12.4
April.....	9.8	11.4	16.2	11.2	11.7	13.8	10.9	12.5
May.....	12.4	15.8	13.0	8.5	12.0	13.7	15.0	14.0
June.....	9.8	15.0	13.8	14.6	13.7	15.6	13.3	12.9
July.....	9.4	14.8	13.4	14.9	9.3	13.6	11.9	11.1
August.....	13.8	13.8	11.0	9.6	10.7	13.3	13.1	14.5
September.....	11.2	10.8	10.8	12.8	10.4	11.9	12.2	12.2
October.....	13.2	16.4	8.2	10.1	9.9	12.3	11.7	12.3
November.....	15.4	12.3	7.7	13.6	9.1	12.3	15.0	12.3
December.....	12.5	11.3	18.3	13.5	9.8	13.7	13.4	10.4
TOTALS.....	138.9	162.6	149.8	150.1	144.3	154.7	154.9	149.8

Section 2.—Total Foreign Trade

In considering the figures in Sections 2 to 6, reference should be made to the explanatory notes on trade in Section 1. It must be emphasized that gold imports and exports are excluded from all tables.

1.—Value of Total Foreign Trade of Canada (excluding Gold) 1912-56

NOTE.—These figures are available on a calendar year basis since 1919; figures for 1919-34 are given in the 1950 Year Book, p. 905, and for 1935-41 in the 1954 edition, p. 969. Figures for the years ended Mar. 31, 1868-1939 are given in the 1940 Year Book, p. 526.

Year	Imports			Exports			Balance of Trade: Excess of Exports (+) Imports (-)
	Dutiable	Free	Total	Domestic Produce	Foreign Produce	Total	
	\$	\$	\$	\$	\$	\$	\$
1942.....	715,018,745	929,223,188	1,644,241,933	2,363,773,296	21,692,750	2,385,466,046	+ 741,224,113
1943.....	836,548,673	898,528,217	1,735,076,890	2,971,475,277	29,877,002	3,001,352,279	+1,266,275,389
1944.....	884,751,584	874,146,613	1,758,898,197	3,439,953,165	43,145,447	3,483,098,612	+1,724,200,415
1945.....	798,795,201	786,979,941	1,585,775,142	3,218,330,353	49,093,935	3,267,424,288	+1,681,649,146
1946.....	1,078,943,972	848,335,430	1,927,279,402	2,312,215,301	26,950,546	2,339,165,847	+ 411,886,445

1.—Value of Total Foreign Trade of Canada (excluding Gold) 1942-56—concluded

Year	Imports			Exports			Balance of Trade: Excess of Exports (+) Imports (-)
	Dutiable	Free	Total	Domestic Produce	Foreign Produce	Total	
	\$	\$	\$	\$	\$	\$	\$
1947.....	1,562,690,081	1,011,254,044	2,573,944,125	2,774,902,355	36,888,055	2,811,790,410	+ 237,846,285
1948.....	1,382,202,722	1,254,742,630	2,636,945,352	3,075,438,085	34,590,583	3,110,028,668	+ 473,083,316
1949.....	1,444,123,667	1,317,083,574	2,761,207,241	2,992,960,978	29,491,856	3,022,452,834	+ 261,245,593
1950.....	1,617,948,425	1,556,304,713	3,174,253,138	3,118,386,551	38,686,122	3,157,072,673	- 17,180,465
1951.....	2,174,304,400	1,910,552,078	4,084,856,478	3,914,460,376	48,923,939	3,963,384,315	- 121,472,163
1952.....	2,162,882,381	1,867,585,272	4,030,467,653	4,301,080,679	54,878,985	4,355,959,664	+ 325,492,011
1953.....	2,417,960,243	1,964,870,187	4,382,830,430	4,117,405,882	55,195,233	4,172,601,115	- 210,229,315
1954.....	2,311,344,114	1,781,852,224	4,093,196,338	3,881,271,854	65,644,868	3,946,916,722	- 146,279,616
1955.....	2,637,434,788	2,074,935,247	4,712,370,035	4,281,784,253	69,499,483	4,351,283,736	- 361,086,299
1956.....	3,291,954,896	2,413,494,007	5,705,448,903	4,789,745,693	73,397,431	4,863,143,124	- 842,305,779

Section 3.—Trade by Geographic Areas

The tables in this Section provide information about Canada's total foreign trade by continent and by country.

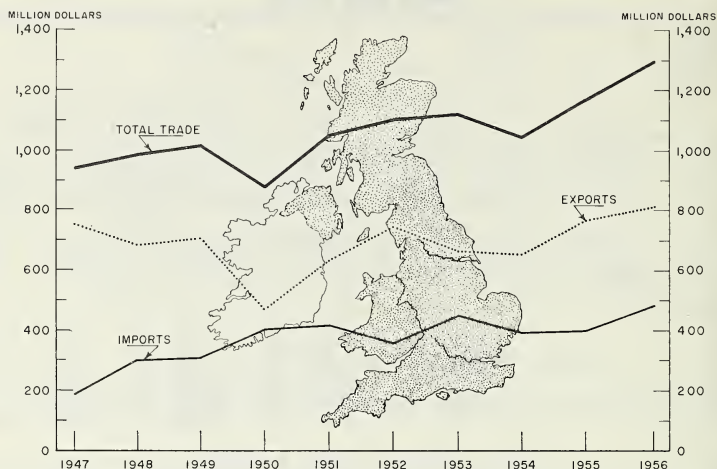
2.—Trade of Canada by Continent 1953-56

Item and Continent	1953		1954		1955		1956	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	\$'000		\$'000		\$'000		\$'000	
Imports								
Europe—								
United Kingdom.....	453,391	10.3	392,472	9.6	400,531	8.5	484,679	8.5
Other Europe.....	173,822	4.0	179,782	4.4	204,741	4.3	297,116	5.2
North America—								
United States.....	3,221,214	73.5	2,961,380	72.3	3,452,178	73.3	4,161,667	72.9
Other North America.....	92,943	2.1	111,400	2.7	140,316	3.0	166,767	2.9
South America.....	252,332	5.7	258,127	6.3	273,657	5.8	305,693	5.4
Asia.....	114,079	2.6	114,868	2.8	162,419	3.4	204,498	3.6
Oceania.....	42,226	1.0	43,079	1.1	46,933	1.0	49,414	0.9
Africa.....	32,823	0.8	32,088	0.8	31,595	0.7	35,615	0.6
Totals, Imports.....	4,382,830	100.0	4,093,196	100.0	4,712,370	100.0	5,705,449	100.0
Exports (Domestic)								
Europe—								
United Kingdom.....	665,232	16.2	653,408	16.8	769,313	18.0	812,706	17.0
Other Europe.....	387,285	9.4	353,452	9.1	393,105	9.2	542,342	11.3
North America—								
United States.....	2,418,915	58.7	2,317,153	59.7	2,559,343	59.8	2,818,655	58.8
Other North America.....	111,627	2.7	114,274	2.9	124,179	2.9	141,503	3.0
South America.....	139,393	3.4	126,709	3.3	94,320	2.2	101,107	2.1
Asia.....	258,204	6.3	185,770	4.8	178,018	4.1	216,223	4.5
Oceania.....	53,716	1.3	65,212	1.7	86,701	2.0	71,534	1.5
Africa.....	83,034	2.0	65,294	1.7	76,805	1.8	85,676	1.8
Totals, Exports (Domestic)...	4,117,406	100.0	3,881,272	100.0	4,281,784	100.0	4,789,746	100.0

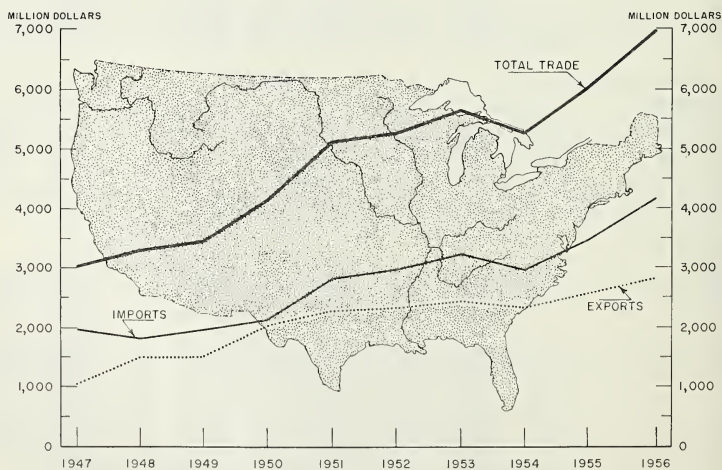
3.—Trade of Canada with Commonwealth and Foreign Countries, Selected Years 1886-1956

Item and Year	Canadian Trade with—							
	United Kingdom		United States		Other Commonwealth Countries		Other Foreign Countries	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
Imports	\$'000		\$'000		\$'000		\$'000	
Ended Mar. 31—								
1886.....	39,033	40.7	42,819	44.6	2,384	2.5	11,757	12.2
1891.....	42,019	37.7	52,033	46.7	2,318	2.1	15,163	13.5
1896.....	32,825	31.2	53,529	50.8	2,389	2.2	16,619	15.8
1901.....	42,820	24.1	107,378	60.3	3,853	2.2	23,900	13.4
1906.....	69,184	24.4	109,256	59.6	14,606	5.1	30,694	10.9
1911.....	109,935	24.3	275,824	60.8	19,533	4.4	47,433	10.5
1916.....	77,404	15.2	370,881	73.0	27,826	5.5	32,091	6.3
1921.....	213,974	17.3	856,177	69.0	52,029	4.2	117,979	9.5
Ended Dec. 31—								
1926.....	164,707	16.3	668,747	66.3	49,907	5.0	124,980	12.4
1929.....	194,778	15.0	893,585	68.8	62,237	4.8	148,343	11.4
1937.....	147,292	18.2	490,505	60.7	89,304	11.0	81,796	10.1
1939.....	114,007	15.2	496,898	66.1	74,893	10.0	65,257	8.7
1943.....	134,965	7.7	1,423,672	82.1	103,666	6.0	72,773	4.2
1947.....	189,370	7.4	1,974,679	76.7	165,024	6.5	244,871	9.5
1948.....	299,502	11.3	1,805,763	68.5	204,612	7.8	327,069	12.4
1949.....	307,450	11.1	1,951,860	70.7	186,779	6.8	315,118	11.4
1950.....	404,213	12.7	2,130,476	67.1	241,411	7.6	398,153	12.6
1951.....	420,985	10.3	2,812,927	68.9	306,104	7.5	544,840	13.3
1952.....	359,757	8.9	2,976,962	73.9	184,704	4.6	509,044	12.6
1953.....	453,391	10.3	3,221,214	73.5	170,571	3.9	537,654	12.3
1954.....	392,472	9.6	2,961,380	72.4	181,760	4.4	557,584	13.6
1955.....	400,531	8.5	3,452,178	73.3	209,772	4.4	649,889	13.8
1956.....	484,679	8.5	4,161,667	72.9	221,232	3.9	837,872	14.7
Exports (Domestic)								
Ended Mar. 31—								
1886.....	36,694	47.2	34,284	44.1	3,263	4.2	3,515	4.5
1891.....	43,244	48.8	37,743	42.6	3,893	4.4	3,791	4.2
1896.....	62,718	57.2	37,789	34.4	4,048	3.7	5,152	4.7
1901.....	92,858	52.3	67,984	38.3	7,891	4.5	8,700	4.9
1906.....	127,456	54.2	83,546	35.5	10,965	4.6	13,516	5.7
1911.....	132,157	48.2	104,116	38.0	16,811	6.1	21,233	7.7
1916.....	451,852	60.9	201,106	27.1	30,677	4.2	57,974	7.8
1921.....	312,845	26.3	542,323	45.6	90,607	7.6	243,389	20.5
Ended Dec. 31—								
1926.....	459,223	36.4	457,878	36.3	95,701	7.6	248,439	19.7
1929.....	290,295	25.2	492,686	42.8	105,006	9.1	264,430	22.9
1937.....	402,062	40.3	360,012	36.1	104,159	10.4	131,134	13.2
1939.....	328,099	35.5	380,392	41.1	102,707	11.1	113,728	12.3
1943.....	1,032,647	34.8	1,149,232	38.7	369,015	12.4	420,581	14.1
1947.....	751,198	27.1	1,034,226	37.3	417,303	15.0	572,175	20.6
1948.....	686,914	22.3	1,500,987	48.8	345,477	11.3	542,060	17.6
1949.....	704,956	23.5	1,503,459	50.2	310,067	10.4	474,480	15.9
1950.....	469,910	15.1	2,020,988	64.8	185,179	5.9	442,310	14.2
1951.....	631,461	16.1	2,297,675	58.7	240,946	6.2	744,379	19.0
1952.....	745,845	17.3	2,306,955	53.7	261,687	6.1	988,593	22.9
1953.....	665,232	16.2	2,418,915	58.7	232,352	5.6	800,906	19.5
1954.....	653,408	16.9	2,317,153	59.7	195,053	5.0	715,658	18.4
1955.....	769,313	18.0	2,559,343	59.8	237,125	5.5	716,004	16.7
1956.....	812,706	17.0	2,818,655	58.8	243,216	5.1	915,169	19.1

CANADIAN TRADE WITH THE UNITED KINGDOM 1947-56



CANADIAN TRADE WITH THE UNITED STATES 1947-56



4.—Trade of Canada by Leading Countries 1954-56

Rank in—			Item and Country	1954	1955	1956
1954	1955	1956				
			Imports	\$'000	\$'000	\$'000
1	1	1	United States.....	2,961,380	3,452,178	4,161,667
2	2	2	United Kingdom.....	392,472	400,531	484,679
3	3	3	Venezuela.....	167,594	187,277	208,401
4	4	4	Germany, Federal Republic.....	44,485	55,603	89,348
15	5	5	Japan.....	19,197	36,718	60,826
7	9	6	Belgium and Luxembourg.....	25,077	29,051	52,728
21	10	7	Mexico.....	14,033	28,814	41,699
12	8	8	Netherlands Antilles.....	20,582	30,722	38,119
5	7	9	Brazil.....	31,623	30,747	34,832
11	13	10	France.....	22,046	25,016	32,600
6	6	11	India.....	28,054	35,147	30,898
14	11	12	Malaya and Singapore.....	19,586	28,810	28,558
9	12	13	Australia.....	24,657	26,295	26,310
20	17	14	Italy.....	15,006	18,502	24,967
46	29	15	Arabia.....	2,225	6,986	24,712
19	21	16	Jamaica.....	15,309	15,567	24,633
10	15	17	Netherlands.....	22,562	20,951	23,776
8	14	18	Colombia.....	24,820	22,220	23,056
16	16	19	Switzerland.....	19,151	19,365	22,301
13	18	20	British Guiana.....	20,482	18,307	20,498
17	19	21	Lebanon.....	17,413	17,920	19,601
25	24	22	Sweden.....	9,175	12,152	17,303
22	20	23	Ceylon.....	12,527	15,581	16,564
28	23	24	New Zealand.....	7,314	12,316	12,321
23	25	25	Cuba.....	9,913	10,025	12,279
24	26	26	Trinidad and Tobago.....	9,595	9,840	11,051
29	30	27	Union of South Africa.....	5,911	6,255	8,401
1	1	28	Mauritius and Seychelles.....	1	1	7,758
30	27	29	Panama.....	5,850	9,037	7,585
18	22	30	British East Africa.....	15,852	13,158	7,290
			Totals, 30 Leading Countries.....	3,983,891	4,595,091	5,574,761
			Grand Totals, Imports.....	4,093,196	4,712,370	5,705,449
			Exports (Domestic)			
1	1	1	United States.....	2,317,153	2,559,343	2,818,655
2	2	2	United Kingdom.....	653,408	769,313	812,706
4	4	3	Germany, Federal Republic.....	86,899	90,751	134,098
3	3	4	Japan.....	96,474	90,893	127,870
9	6	5	Union of South Africa.....	39,883	56,026	64,616
5	7	6	Belgium and Luxembourg.....	54,987	53,384	57,852
8	9	7	Norway.....	43,813	47,031	57,682
10	8	8	Netherlands.....	39,777	47,689	54,559
11	10	9	France.....	33,799	42,563	53,156
6	5	10	Australia.....	45,768	58,482	47,747
13	11	11	Mexico.....	27,359	37,126	39,385
15	13	12	Italy.....	23,844	27,653	37,744
12	12	13	Venezuela.....	30,973	30,756	34,335
14	14	14	Switzerland.....	26,826	25,640	33,535
17	15	15	India.....	17,689	24,669	25,714
33	2	16	Union of Soviet Socialist Republics.....	4,854	2,680	24,606
2	2	17	Czechoslovakia.....	295	1,062	24,558
19	18	18	Philippines.....	15,863	18,136	18,060
20	17	19	New Zealand.....	14,807	22,344	17,995
2	40	20	Poland.....	558	4,005	17,918
16	16	21	Colombia.....	21,000	22,691	17,589
21	20	22	Jamaica.....	11,552	12,907	17,222
18	19	23	Cuba.....	17,455	13,910	15,371
7	23	24	Brazil.....	45,096	11,520	13,026
22	22	25	Trinidad and Tobago.....	11,425	12,625	12,491
32	31	26	Peru.....	5,086	6,001	11,337
24	29	27	Pakistan.....	8,970	6,202	10,502
27	24	28	Puerto Rico.....	7,757	9,715	10,421
25	21	29	Ireland.....	8,821	12,808	10,144
42	25	30	Sweden.....	3,518	7,622	7,894
			Totals, 30 Leading Countries.....	3,715,709	4,125,547	4,628,788
			Grand Totals, Exports (Domestic).....	3,881,272	4,281,784	4,789,746

¹ Included with British East Africa prior to 1956.² Lower than 50th.

5.—Value of Imports by Country 1950-56 with Averages 1935-39

Country	Averages 1935-39	1950	1951	1952	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
North America	421,356	2,131,470	2,814,436	2,979,344	3,224,247	2,968,996	3,456,175	4,165,506
Alaska.....	93	976	1,483	2,333	2,961	7,573	3,932	3,792
Greenland.....	311	—	—	—	6	13	13	10
St. Pierre and Miquelon.....	26	18	25	48	66	30	52	38
United States.....	418,738	2,130,476	2,812,927	2,976,962	3,221,214	2,961,380	3,452,178	4,161,667
Central America and Antilles	14,570	125,582	113,818	112,431	89,910	103,784	136,319	162,928
Bahamas.....	1	532	346	406	427	418	272	221
Barbados.....	3,261	10,057	13,409	8,666	2,375	5,358	8,236	4,634
Bermuda.....	102	87	82	317	126	390	258	273
British Honduras.....	87	445	458	26	139	124	164	171
Jamaica.....	5,100	19,080	18,041	9,204	11,761	15,369	15,567	24,633
Leeward and Windward Islands.....	1,816	395	956	216	1,210	1,250	2,456	2,193
Trinidad and Tobago.....	2,387	15,205	15,082	9,660	8,062	9,595	9,840	11,051
American Virgin Islands.....	²	12	166	—	—	²	²	—
Costa Rica.....	77	3,378	8,785	8,740	9,472	7,746	5,948	3,893
Cuba.....	615	4,134	8,333	18,615	11,654	9,913	10,025	12,279
Dominican Republic.....	4	1,180	1,126	6,000	5,854	1,663	1,529	1,346
El Salvador.....	19	848	1,183	771	1,389	951	2,962	1,133
French West Indies.....	1	²	²	²	²	1	158	²
Guatemala.....	67	5,781	4,618	2,080	3,259	5,060	4,545	3,227
Haiti.....	63	1,769	3,020	1,928	748	1,570	1,597	1,683
Honduras.....	49	6,621	4,027	4,643	4,594	2,589	1,666	7,079
Mexico.....	667	32,974	18,013	23,937	15,785	14,033	28,814	41,699
Netherlands Antilles.....	150	17,336	10,809	11,747	8,154	20,582	30,722	38,119
Nicaragua.....	²	339	596	501	391	181	1,429	655
Panama.....	32	5,478	3,492	4,125	3,637	5,850	9,037	7,585
Puerto Rico.....	13	931	1,276	846	872	1,203	1,094	1,054
South America	22,930	174,010	246,666	237,073	252,332	258,127	273,657	305,693
British Guiana.....	5,846	21,735	25,025	23,660	17,800	20,482	18,307	20,498
Falkland Islands.....	²	—	—	—	—	1	—	—
Argentina.....	5,374	10,913	13,955	4,374	8,529	2,738	4,414	4,626
Bolivia.....	26	2,442	1,848	3,351	1,415	267	19	88
Brazil.....	920	28,178	40,627	35,103	35,047	31,623	30,747	34,832
Chile.....	125	1,353	2,153	3,282	1,052	236	250	1,704
Colombia.....	5,139	13,342	13,063	18,004	23,215	24,820	22,220	23,056
Ecuador.....	41	1,473	2,438	2,751	2,688	3,763	5,187	4,498
French Guiana.....	1	—	—	—	3	—	²	—
Paraguay.....	62	350	343	346	260	520	237	142
Peru.....	3,554	3,961	5,588	8,050	2,928	2,264	869	2,766
Surinam.....	²	228	1,141	628	1,345	2,793	3,646	3,925
Uruguay.....	180	2,770	3,768	1,863	2,903	1,025	483	1,157
Venezuela.....	1,662	87,264	136,718	135,758	155,147	167,594	187,277	208,401
Northwestern Europe	157,485	485,362	567,916	485,675	600,417	544,666	572,358	737,036
United Kingdom.....	124,047	404,213	420,985	359,757	453,391	392,472	400,531	484,679
Austria.....	245	964	3,191	2,917	2,967	3,043	2,709	3,913
Belgium and Luxembourg.....	6,330	22,795	39,095	33,216	29,082	25,077	29,051	52,728
Denmark.....	165	1,406	3,730	2,167	2,175	3,463	4,269	6,182
France.....	6,382	14,669	23,974	19,117	22,267	22,046	25,016	32,600
Germany, Federal Republic.....	10,364 ³	11,026 ³	30,936 ³	22,629	35,507	44,485	55,603	89,348
Iceland.....	3	233	26	50	80	59	8	9
Ireland.....	69	148	785	462	582	1,150	336	415
Netherlands.....	3,984	8,896	14,010	16,495	22,298	22,562	20,951	23,776
Norway.....	742	1,405	2,977	3,857	2,289	1,983	2,366	3,780
Sweden.....	2,044	5,145	11,808	8,611	9,341	9,175	12,152	17,303
Switzerland.....	3,110	14,464	16,398	16,396	20,437	19,151	19,365	22,301
Southern Europe	3,863	15,240	23,943	18,326	21,320	22,861	27,204	33,459
Gibraltar.....	—	²	—	—	—	1	²	1
Malta.....	2	20	47	51	67	67	62	53
Azores and Madeira.....	157	387	410	285	179	193	200	164
Greece.....	47	203	174	197	224	231	280	274
Italy.....	2,403	9,373	14,217	11,735	14,271	15,006	18,502	24,967
Portugal.....	265	1,698	1,980	1,798	1,962	1,798	1,941	2,272
Spain.....	989	3,558	7,114	4,260	4,619	5,566	6,220	5,727

¹ Included with Leeward and Windward Islands.² Less than \$500.³ Includes all Germany.

5.—Value of Imports by Country 1950-56 with Averages 1935-39—continued

Country	Averages 1935-39	1950	1951	1952	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Eastern Europe	2,943	6,903	7,070	7,553	5,476	4,727	5,709	11,300
Bulgaria	4	4	4	2	1	3	4	4
Czechoslovakia	1,979	6,036	4,668	3,559	2,589	1,796	2,880	5,675
Estonia	23	30	116	31	9	5	2	1
Finland	70	217	158	234	548	609	384	527
Germany, Eastern	2	2	2	492	959	721	572	779
Hungary	130	36	121	279	184	210	124	209
Latvia	11	3	33	36	7	5	5	2
Lithuania	4	—	12	16	3	2	—	1
Poland	185	357	1,430	556	244	405	595	2,185
Romania	96	19	22	13	7	3	1	3
Union of Soviet Socialist Republics	341	80	358	2,234	824	687	628	1,007
Yugoslavia	99	122	149	101	101	284	516	907
Middle East	1,612	32,098	45,204	29,338	30,650	23,697	31,770	50,342
Aden	4	12	22	7	10	79	48	73
Arabia	3	28,115	22,659	7,559	2,196	2,225	6,986	24,712
Egypt	728	659	711	462	4,203	440	294	166
Ethiopia	5	31	31	21	44	97	90	125
Iran	126	192	521	1,168	1,025	1,385	2,064	1,057
Iraq	357	1,201	2,132	924	1,371	238	1,299	941
Israel	68	490	929	1,161	1,312	1,040	1,166	1,511
Italian Africa	1	2	3	—	—	—	—	—
Jordan	—	—	—	—	—	—	2	1
Libya	—	—	—	—	—	1	3	1
Lebanon	6	62	16,381	15,171	19,584	17,413	17,920	19,601
Syria	25	53	58	72	56	23	1,059	1,351
Sudan	293	53	76	60	57	97	97	97
Turkey	293	1,280	1,757	2,719	791	699	743	706
Other Asia	34,355	113,537	150,954	92,019	87,734	91,766	131,133	154,544
Ceylon	4,015	17,604	16,396	12,492	14,461	12,527	15,581	16,564
India	8,315	37,262	40,217	26,822	26,627	28,054	35,147	30,898
Pakistan	—	1,706	2,233	191	558	566	816	1,306
Hong Kong	842	2,203	3,001	3,711	4,427	4,154	5,875	5,699
Malaya and Singapore	11,154	28,852	57,980	25,473	21,896	19,586	28,810	28,558
Other British East Indies	79	47	4,623	1,772	350	172	71	122
Afghanistan	1	109	51	19	42	9	6	—
Burma	381	—	4	2	79	7	1	1
China	3,344	5,299	1,929	1,286	1,119	1,621	3,125	5,721
Taiwan	126	—	1	—	75	187	155	112
Indo-China	800	728	1,052	893	598	611	1,001	1,143
Indonesia	4,649	12,087	12,577	13,162	13,629	19,197	36,718	60,826
Japan	1	35	1	8	54	170	480	8
Korea	563	6,425	8,954	5,423	2,986	4,001	2,027	2,467
Philippines	1	—	—	—	14	1	—	—
Portuguese Asia	84	1,181	1,938	764	896	786	1,142	1,103
Thailand	—	—	—	—	—	—	—	—
Other Africa	8,455	34,113	30,748	25,595	28,518	31,495	31,112	35,227
British East Africa	2,683	15,067	10,864	9,593	9,393	15,852	13,158	7,289
Mauritius and Seychelles	—	—	—	—	—	—	—	7,758
Federation of Rhodesia and Nyasaland	316 ⁴	452	1,505	1,474	3,864	1,161	482	720
Union of South Africa	4,210	4,964	5,372	4,165	4,616	5,911	6,255	8,401
Other British South Africa	701	8,999	7,112	5,523	3,159	1,986	3,775	4,063
Gold Coast	370	1,486	898	1,764	1,584	866	858	986
Nigeria	7	294	49	6	2	7	8	18
Sierra Leone	1	—	—	—	—	—	—	—
Other British West Africa	—	—	—	—	—	—	—	—
Belgian Congo	5	1,481	3,052	990	2,247	1,489	2,673	2,744
Canary Islands	10	6	22	30	26	26	25	24
French Africa	61	543	398	404	2,631	3,184	3,267	2,075
Liberia	14	—	183	29	372	135	214	441
Madagascar	31	8	29	1	8	304	14	38
Morocco	32	704	1,071	1,049	529	197	195	196
Portuguese East Africa	15	109	198	576	73	191	128	370
Portuguese West Africa	—	—	—	—	—	181	44	94
Spanish Africa	—	—	—	—	2	—	16	1

¹ Less than \$500.² Included with Germany, Federal Republic.³ Not listed separately.⁴ Southern Rhodesia only.

5.—Value of Imports by Country 1950-56 with Averages 1935-39—concluded

Country	Averages 1935-39	1950	1951	1952	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Oceania	17,015	55,938	84,102	43,114	42,236	43,079	46,933	49,414
Australia.....	9,728	32,803	46,228	18,712	23,464	24,657	26,295	26,310
Fiji.....	2,341	10,194	5,993	6,487	5,554	5,813	5,016	6,267
New Zealand.....	4,754	11,855	30,107	14,231	8,572	7,314	12,316	12,321
Other British Oceania.....	3	—	—	—	—	—	—	142
French Oceania.....	3	476	360	1	—	3	—	1
Hawaii.....	186	495	1,414	3,473	4,635	5,292	3,305	4,374
United States Oceania.....	1	115	—	210	—	—	—	1
Totals, Imports	684,582	3,174,253	4,084,856	1,030,468	1,382,830	1,093,196	4,712,370¹	5,705,449
Totals, Commonwealth Countries	194,442	645,624	727,089	544,462	623,962	574,231	610,302¹	705,911
Totals, United States and Dependencies	419,030	2,133,005	2,817,265	2,983,824	3,229,682	2,975,447	3,460,510	4,170,886

¹ Less than \$500.

6.—Value of Domestic Exports by Country 1950-56 with Averages 1935-39

Country	Averages 1935-39	1950	1951	1952	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
North America	329,805	2,023,142	2,301,330	2,309,787	2,421,558	2,319,950	2,562,031	2,823,358
Alaska.....	154	959	2,264	1,249	1,130	1,272	1,221	3,128
Greenland.....	—	134	206	303	194	299	86	176
St. Pierre and Miquelon.....	309	1,061	1,186	1,279	1,319	1,226	1,382	1,399
United States.....	321,294	2,020,988	2,297,675	2,306,955	2,418,915	2,317,153	2,559,343	2,818,655
Central America and Antilles	17,699	96,544	119,680	137,688	108,984	111,477	121,491	136,800
Bahamas.....	1	1,937	2,136	2,353	2,298	2,271	2,133	2,303
Barbados.....	1,218	2,974	4,584	3,912	3,734	4,378	4,267	4,721
Bermuda.....	1,381	2,991	3,693	3,158	3,070	2,992	3,010	2,900
British Honduras.....	255	491	572	381	376	299	304	248
Jamaica.....	3,887	7,495	10,213	10,591	12,490	11,552	12,907	17,222
Leeward and Windward Islands.....	1,606	3,213	4,229	4,276	3,864	3,831	4,149	4,281
Trinidad and Tobago.....	3,372	7,476	9,950	11,034	9,490	11,425	12,625	12,491
American Virgin Islands.....	42	156	181	167	178	119	190	130
Costa Rica.....	103	2,312	2,175	2,612	2,199	2,834	3,576	2,743
Cuba.....	1,418	18,005	20,424	24,181	16,124	17,455	13,910	15,371
Dominican Republic.....	171	2,954	4,060	4,643	3,993	4,269	4,168	4,985
El Salvador.....	69	1,467	2,002	2,230	1,901	1,526	1,808	2,295
French West Indies.....	157	39	40	47	26	24	23	17
Guatemala.....	117	2,401	2,365	1,896	2,234	2,021	2,508	3,003
Haiti.....	131	2,513	2,588	3,417	2,670	3,307	2,446	2,917
Honduras.....	159	613	3,575	1,736	556	471	588	868
Mexico.....	2,630	17,624	29,880	39,641	28,986	27,359	37,126	39,385
Netherlands Antilles.....	176	4,464	1,834	1,541	1,308	1,775	1,444	1,349
Nicaragua.....	72	756	1,097	1,185	1,354	1,653	1,769	1,402
Panama.....	316	9,019	5,961	11,359	4,380	4,057	2,824	7,748
Puerto Rico.....	425	7,643	8,120	7,328	7,753	7,757	9,715	10,421
South America	15,016	90,684	140,145	186,984	139,393	126,709	94,320	101,107
British Guiana.....	1,344	4,052	5,308	6,356	4,777	4,080	2,967	4,351
Falkland Islands.....	2	1	2	31	41	4	274	11
Argentina.....	4,696	13,360	8,883	8,227	7,641	6,692	6,833	6,183
Bolivia.....	113	2,267	3,484	6,398	5,501	1,272	1,086	1,489
Brazil.....	4,012	15,806	53,684	81,367	37,561	45,096	11,520	13,026
Chile.....	848	6,864	13,751	10,090	3,945	3,130	3,820	4,420
Colombia.....	1,296	14,806	12,311	13,756	20,146	21,000	22,691	17,589
Ecuador.....	93	112	2,713	2,030	4,220	5,509	4,953	4,344
French Guiana.....	36	5	4	3	6	4	2	1
Paraguay.....	8	110	167	112	339	167	91	238
Peru.....	1,072	3,744	5,054	16,405	15,108	5,086	6,001	11,337
Surinam.....	49	863	934	1,097	712	911	971	1,025
Uruguay.....	310	1,918	6,868	5,429	2,912	2,784	2,355	2,758
Venezuela.....	1,139	25,457	26,982	35,683	36,485	30,973	30,756	34,335

¹ Included with Leeward and Windward Islands.² Less than \$500.

6.—Value of Domestic Exports by Country 1950-56 with Averages 1935-39—continued

Country	Averages 1935-39	1950	1951	1952	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Northwestern Europe	412,354	639,223	934,716	1,151,964	991,813	958,303	1,106,502	1,230,650
United Kingdom.....	353,741	469,910	631,461	745,845	665,232	653,408	769,313	812,706
Austria.....	27	2,369	2,166	5,216	5,136	2,857	6,025	5,214
Belgium and Luxembourg.....	13,204	66,351	94,457	104,376	69,510	54,987	53,384	57,852
Denmark.....	1,438	923	5,587	9,881	6,303	2,929	3,172	3,516
France.....	8,566	18,403	46,538	48,264	32,281	33,799	42,563	53,156
Germany, Federal Republic.....	9,639 ¹	8,873 ¹	37,028 ¹	94,863	83,858	86,899	90,751	134,098
Iceland.....	28	847	700	833	2,058	669	505	292
Ireland.....	3,861	13,321	20,921	23,058	13,356	8,821	12,808	10,144
Netherlands.....	10,062	8,617	26,191	41,508	42,382	39,777	47,689	54,559
Norway.....	7,247	18,924	32,198	39,002	37,278	43,813	47,031	57,682
Sweden.....	3,593	4,250	12,125	12,198	4,587	3,518	7,622	7,894
Switzerland.....	948	26,435	25,345	26,918	29,833	26,826	25,640	33,535
Southern Europe	4,986	33,811	59,930	68,352	56,925	35,136	43,245	51,552
Gibraltar.....	9	329	648	353	486	252	286	240
Malta.....	377	4,680	2,150	3,111	3,307	3,043	3,934	4,064
Greece.....	1,142	1,833	2,703	4,415	1,560	2,505	4,298	2,523
Italy.....	2,785	15,476	48,763	52,645	33,170	23,844	27,653	37,744
Portugal.....	170	5,641	4,665	4,026	3,991	2,118	2,554	1,696
Azores and Madeira.....	8	210	259	224	231	641	311	231
Spain.....	495	5,642	742	3,579	14,179	2,734	4,210	5,053
Eastern Europe	3,091	5,635	6,510	25,873	3,779	13,420	12,671	72,846
Albania.....	3	2	1	1	—	2	2	2
Bulgaria.....	10	215	8	2	3	8	2	105
Czechoslovakia.....	881	2,179	492	367	123	295	1,062	24,558
Estonia.....	5	—	—	—	—	—	—	2
Finland.....	539	600	3,129	2,694	1,388	476	1,736	1,952
Eastern Germany.....	3	3	3	—	—	2	2,261	1,458
Hungary.....	4	86	30	81	48	35	165	1,913
Latvia.....	242	—	—	—	—	2	2	2
Lithuania.....	196	1	—	—	—	—	—	—
Poland.....	805	1,432	94	69	183	558	4,005	17,918
Romania.....	52	122	11	45	94	74	397	124
Union of Soviet Socialist Republics.....	336	182	7	2	—	4,854	2,680	24,606
Yugoslavia.....	18	818	2,739	22,613	1,940	7,119	363	213
Middle East	1,511	23,749	31,117	50,326	33,218	24,500	12,108	11,987
Aden.....	109	31	25	127	34	22	16	9
Arabia.....	4	875	1,414	2,149	2,644	1,594	1,244	1,942
Egypt.....	399	3,716	2,466	19,363	11,688	1,201	1,291	2,539
Ethiopia.....	5	54	198	54	55	118	73	121
Iran.....	118	993	1,000	585	753	757	644	790
Iraq.....	55	70	1,062	313	458	425	1,170	657
Israel.....	251	12,126	11,816	11,940	9,059	10,174	4,558	2,725
Italian Africa.....	2	184	3	6	—	1	49	6
Jordan.....	4	46	1,071	105	38	123	49	97
Libya.....	2	374	2,029	854	1,279	840	74	101
Lebanon.....	80	1,462	7,036	9,355	5,161	982	1,293	1,320
Syria.....	109	75	34	104	578	1,169	1,045	719
Sudan.....	388	3,744	2,962	4,791	1,455	7,086	647	887
Turkey.....	388	3,744	2,962	4,791	1,455	7,086	647	887
Other Asia	36,001	95,757	163,986	224,196	238,024	163,438	167,352	207,078
Ceylon.....	246	4,353	3,470	5,825	3,307	3,147	2,671	3,341
India.....	3,732	31,520	35,737	55,423	37,187	17,689	24,669	25,714
Pakistan.....	8,681	8,681	4,496	16,016	32,103	8,970	6,202	10,502

¹ Includes all Germany.² Less than \$500.³ Included with Germany, Federal Republic.

* Not listed separately.

6.—Value of Domestic Exports by Country 1950-56 with Averages 1935-39—concluded

Country	Averages 1935-39	1950	1951	1952	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Other Asia—concl.								
Hong Kong.....	1,651	8,004	12,033	9,582	9,000	8,252	7,253	7,026
Malaya and Singapore.....	2,173	4,097	10,796	7,067	2,854	2,983	3,421	3,914
Other British East Indies.....	5	32	1	13	27	18	53	127
Afghanistan.....	1	52	97	272	150	55	20	14
Burma.....	71	30	279	1,023	444	212	480	288
China.....	3,808	2,057	367	1,156	—	70	1,016	2,427
Taiwan.....	85	69	223	327	1,482	3,186	1,227	751
Indo-China.....	801	3,052	5,227	6,250	351	190	337	546
Indonesia.....	21,880	20,533	72,976	102,603	118,568	96,474	90,893	127,870
Japan.....	3	1,143	213	335	14,991	3,197	7,514	2,864
Korea.....	1,523	10,829	15,598	16,045	13,872	15,863	18,136	18,060
Philippines.....	1	103	107	282	190	43	174	454
Portuguese Asia.....	22	1,200	2,378	1,976	1,509	1,767	2,341	1,936
Thailand.....								
Other Africa.....	20,648	55,393	78,090	69,878	69,996	63,126	75,362	82,834
British East Africa.....	789	849	1,444	1,031	348	375	602	415
Mauritius and Seychelles.....								108
Federation of Rhodesia and Nyasaland.....	970 ^a	1,597	2,950	2,662	2,220	3,945	4,323	4,679
Union of South Africa.....	15,457	42,561	52,736	47,852	50,763	39,883	56,026	64,616
Other British South Africa.....		5	27	12	15	7	5	6
Gambia.....	35	12	26	9	29	38	77	60
Gold Coast.....	270	581	980	254	1,749	2,313	1,461	1,481
Nigeria.....	145	247	796	865	942	1,452	890	750
Sierra Leone.....	203	219	200	159	235	356	598	614
Other British West Africa.....	1	1	1	—	1	33	33	40
Belgian Congo.....	89	2,471	4,318	5,900	3,349	3,628	3,534	2,786
Canary Islands.....	17	237	107	825	23	1	—	3
French Africa.....	248	1,927	6,748	3,226	1,248	1,204	1,176	1,037
Liberia.....	17	109	1,373	203	3,145	4,071	2,456	1,781
Madagascar.....	13	117	102	97	64	41	71	47
Morocco.....	711	1,700	3,381	4,630	3,809	2,824	1,791	2,028
Portuguese East Africa.....	1,675	2,702	2,827	2,088	1,997	2,614	2,044	2,197
Portuguese West Africa.....						323	274	173
Spanish Africa.....	9	62	75	64	59	17	2	11
Oceania.....	43,424	54,449	78,955	76,033	53,716	65,212	86,701	71,534
Australia.....	28,924	35,446	49,079	49,697	39,629	45,768	58,482	47,747
Fiji.....	387	234	802	519	424	654	1,055	1,121
New Zealand.....	12,799	10,983	21,757	18,844	7,475	14,807	22,344	17,995
Other British Oceania.....	25	15	82	71	64	103	81	118
French Oceania.....	80	737	626	424	487	389	477	482
Hawaii.....	1,207	6,830	6,418	6,280	5,385	3,222	3,924	3,859
United States Oceania.....	2	205	191	198	253	269	335	212
Totals, Exports.....	884,536	3,118,387	3,914,460	4,301,081	4,117,406	3,881,272	4,281,784	4,789,746
Totals, Commonwealth Countries.....	443,261	655,089	872,407	1,007,533	897,555	848,461	1,006,437	1,055,922
Totals, United States and Dependencies.....	323,124	2,036,780	2,314,848	2,322,177	2,433,614	2,329,792	2,574,728	2,836,405

¹ Less than \$500.² Southern Rhodesia only.

The proportion of imports subject to duty varies widely between countries and geographic areas. Generally the Canadian tariff imposes duties on a greater proportion of manufactured goods than of natural products. Countries supplying chiefly manufactures to Canada tend to have duties charged on a greater proportion of their goods and also to have relatively higher average *ad valorem* rates of duty charged on their goods than is the case with countries supplying chiefly natural products. Variations in the proportion of imports dutiable as between different countries, or in the average *ad valorem* rates of duty charged on imports from different countries therefore do not necessarily indicate differences in the tariff relations between Canada and these countries.

7.—Values of Dutiable and Free Imports by Leading Countries 1954-56

Country	1954			1955			1956		
	Dutiable	Free	Total	Dutiable	Free	Total	Dutiable	Free	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
North America¹	1,802,261	1,166,735	2,968,996	2,076,686	1,379,489	3,456,175	2,572,802	1,592,704	4,165,506
United States	1,799,403	1,161,976	2,961,380	2,073,568	1,378,610	3,452,178	2,569,557	1,592,109	4,161,667
Central America and Antilles¹	77,611	26,173	103,784	87,774	48,545	136,319	98,953	63,975	162,928
Barbados	3,493	1,865	5,358	6,091	2,144	8,236	3,002	1,632	4,634
Jamaica	10,886	4,423	15,309	7,289	8,278	15,567	11,808	12,825	24,633
Trinidad and Tobago	1,240	8,355	9,595	1,780	8,060	9,840	2,412	8,639	11,051
Cuba	8,563	1,350	9,913	8,390	1,635	10,025	10,527	1,752	12,279
Honduras	2,579	11	2,589	1,582	85	1,666	6,908	171	7,079
Mexico	7,280	6,752	14,033	6,527	22,287	28,814	7,227	34,472	41,699
Netherlands Antilles	20,273	310	20,582	30,012	711	30,722	37,818	301	38,119
Panama	5,787	63	5,850	8,837	200	9,037	7,566	19	7,585
South America¹	69,221	188,906	258,127	70,913	202,743	273,657	73,767	231,926	305,693
British Guiana	9,485	10,997	20,482	8,580	9,727	18,307	10,955	9,543	20,498
Argentina	1,346	1,392	2,738	1,649	2,765	4,414	1,451	3,175	4,626
Brazil	21,329	10,294	31,623	21,996	8,751	30,747	25,129	9,703	34,832
Colombia	22,286	2,534	24,820	18,796	3,424	22,220	17,699	5,357	23,056
Ecuador	3,757	6	3,763	5,027	160	5,187	4,422	76	4,498
Venezuela	9,202	158,392	167,594	14,263	173,015	187,277	11,563	196,839	208,401
Northwestern Europe¹	282,156	262,510	544,666	302,350	270,008	572,358	413,806	323,229	737,036
United Kingdom	171,424	221,047	392,472	175,622	224,909	400,531	220,510	264,169	484,679
Belgium and Luxembourg	16,807	8,270	25,077	19,473	9,578	29,051	40,873	11,855	52,728
Denmark	2,164	1,299	3,463	3,068	1,201	4,269	4,174	2,008	6,182
France	16,021	6,025	22,046	17,309	7,707	25,016	24,439	8,161	32,600
Germany, Federal Republic	33,404	11,081	44,485	42,484	13,119	55,603	68,244	21,104	89,349
Netherlands	13,264	9,298	22,562	14,217	6,734	20,951	16,247	7,529	23,776
Sweden	7,437	1,738	9,175	9,380	2,772	12,152	13,080	4,223	17,303
Switzerland	16,351	2,799	19,151	16,270	3,095	19,365	19,411	2,890	22,301
Southern Europe¹	14,815	8,046	22,861	17,026	10,179	27,204	23,082	10,377	33,459
Italy	11,353	3,653	15,006	13,891	4,611	18,502	19,700	5,266	24,967
Spain	2,095	3,471	5,566	1,639	4,581	6,220	1,800	3,928	5,727
Eastern Europe¹	3,429	1,297	4,727	4,455	1,254	5,709	9,476	1,824	11,300
Czechoslovakia	1,679	118	1,796	2,602	278	2,880	5,427	248	5,675
Middle East¹	1,388	22,308	23,697	1,671	30,098	31,770	1,205	49,137	50,342
Arabia	22	2,203	2,225	6	6,980	6,986	13	24,699	24,712
Lebanon	7	17,407	17,413	8	17,912	17,920	3	19,598	19,601

¹ Includes other countries not specified.

7.—Values of Dutiable and Free Imports by Leading Countries 1954-56—concluded

Country	1954			1955			1956		
	Dutiable	Free	Total	Dutiable	Free	Total	Dutiable	Free	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Other Asia¹	24,239	67,527	91,766	40,430	90,703	131,133	60,643	93,901	154,544
Ceylon.....	887	11,640	12,527	739	14,842	15,581	765	15,799	16,564
Hong Kong.....	3,119	1,035	4,154	4,421	1,455	5,875	4,735	964	5,699
India.....	4,232	23,822	28,054	5,310	29,837	35,147	6,333	24,565	30,898
Malaya and Singapore..	77	19,509	19,586	193	28,617	28,810	320	28,238	28,558
China.....	157	1,464	1,621	553	2,573	3,125	565	5,156	5,721
Japan.....	14,855	4,342	19,197	27,902	8,816	36,718	46,382	14,445	60,826
Other Africa¹	14,231	17,263	31,495	13,701	17,410	31,112	15,861	19,367	35,227
British East Africa.....							76	7,214	7,289
Mauritius and Seychelles.....	7,737	8,115	15,852	7,865	5,293	13,158	7,757	2	7,758
Union of South Africa..	1,236	4,674	5,911	1,130	5,126	6,255	2,944	5,457	8,401
Oceania¹	21,993	21,087	43,079	22,427	24,506	46,933	22,360	27,054	49,414
Australia.....	9,862	14,795	24,657	10,655	15,640	26,295	10,265	16,045	26,310
Fiji.....	5,813	—	5,813	5,016	1	5,016	6,266	1	6,267
New Zealand.....	1,437	5,877	7,314	3,618	8,698	12,316	1,597	10,724	12,321
Totals, Imports.....	2,311,344	1,781,852	4,093,196	2,637,435	2,074,935	4,712,370	2,391,955	2,413,494	5,705,449
Totals, Commonwealth Countries..	235,504	338,727	574,231	242,870	367,432	610,302	295,266	410,644	705,911
Totals, Other Countries.....	2,075,840	1,443,125	3,518,965	2,394,565	1,707,503	4,102,068	2,096,689	2,002,850	4,999,538

¹ Includes other countries not specified.

8.—Average Ad Valorem Rates of Duty Collected and Percentage Proportions of Imports from the United Kingdom and from the United States to Totals of Dutiable and Free Imports 1947-56.

NOTE.—Figures for the years ended Mar. 31, 1868-1939 are given in the 1940 Year Book, p. 532. Calendar year figures for 1939-46 are given in the 1954 edition, p. 982.

Year	United Kingdom					United States				
	Average Ad Valorem Rates of Duty on—		Dutiable to Total Dutiable	Free to Total Free	Percentage of All Imports	Average Ad Valorem Rates of Duty on—		Dutiable to Total Dutiable	Free to Total Free	Percentage of All Imports
	Dutiable Imports	Total Imports				Dutiable Imports	Total Imports			
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1947.....	15.9	6.4	4.9	11.3	7.4	19.5	13.1	84.9	64.0	76.7
1948.....	17.1	7.7	9.8	13.1	11.4	15.7	9.1	76.2	60.0	68.5
1949.....	16.2	6.9	9.1	13.4	11.1	16.0	9.0	75.6	65.3	70.7
1950.....	16.6	6.2	9.3	16.3	12.7	16.3	9.0	72.6	61.4	67.1
1951.....	15.8	6.5	8.0	12.9	10.3	16.5	9.5	74.7	62.2	68.9
1952.....	16.5	7.2	7.3	10.9	8.9	16.8	9.6	78.4	68.7	73.9
1953.....	16.1	6.9	8.0	13.2	10.3	17.4	10.3	78.7	67.0	73.5
1954.....	16.4	7.1	7.4	12.4	9.6	17.3	10.5	77.9	65.2	72.3
1955.....	16.6	7.3	6.7	10.8	8.5	17.3	10.4	78.6	66.4	73.3
1956.....	15.8	7.2	6.7	10.9	8.5	16.7	10.3	78.1	66.0	72.9

9.—Values and Percentages of Trade with Selected Overseas Countries via the United States
1955 and 1956

Country	Imports via the United States				Domestic Exports via the United States			
	1955		1956		1955		1956	
	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.
North America	7	1	—	—	124	1	501	1
Central America and Antilles²	26,090	19.1	30,706	18.8	22,175	18.3	27,879	20.4
British West Indies.....	1,871	5.1	2,087	4.9	894	2.5	790	1.9
Costa Rica.....	4,400	74.0	3,011	77.3	976	27.3	1,068	38.9
Cuba.....	1,383	13.8	3,201	26.1	2,462	17.7	2,488	16.2
Dominican Republic.....	362	23.7	113	8.4	1,174	28.2	1,216	24.4
Guatemala.....	2,561	56.3	1,571	48.7	1,210	48.3	1,784	59.4
Haiti.....	243	15.2	146	8.7	722	29.5	627	21.5
Honduras.....	386	23.2	5,577	78.8	510	86.7	694	80.0
Mexico.....	5,984	20.8	7,062	16.9	9,945	26.8	14,794	37.6
Netherlands Antilles.....	139	0.5	479	1.3	850	58.9	793	58.8
Panama.....	7,293	80.7	6,713	88.5	906	32.1	740	9.6
South America²	148,381	54.2	157,848	51.6	27,069	28.7	32,938	32.6
British Guiana.....	708	3.9	1,190	5.8	30	1.0	39	0.9
Argentina.....	434	9.8	660	14.3	1,344	19.7	1,142	18.5
Brazil.....	5,283	17.2	5,350	15.4	3,148	27.3	5,215	40.0
Chile.....	28	11.1	31	1.8	2,672	69.9	3,399	76.9
Colombia.....	7,891	35.5	6,503	28.2	6,752	29.8	7,463	42.4
Ecuador.....	1,504	29.0	1,334	29.7	1,226	24.8	1,501	34.5
Peru.....	388	44.6	320	11.6	2,714	45.2	3,005	26.5
Surinam.....	736	20.2	588	15.0	341	35.2	271	26.4
Venezuela.....	131,325	70.1	141,692	68.0	7,582	24.7	9,227	26.9
Northwestern Europe²	1,714	0.3	2,051	0.3	26,469	2.4	26,520	2.2
United Kingdom.....	242	0.1	222	1	8,577	1.1	7,307	0.9
Austria.....	49	1.8	172	4.4	719	11.9	1,306	25.1
Belgium and Luxembourg.....	323	1.1	510	1.0	1,683	3.2	1,687	2.9
France.....	301	1.2	379	1.2	3,798	8.9	2,546	4.8
Germany, Federal Republic.....	159	0.3	261	0.3	3,272	3.6	7,138	5.3
Netherlands.....	103	0.5	77	0.3	3,217	6.7	1,460	2.7
Switzerland.....	374	1.9	265	1.2	1,584	6.2	1,107	3.3
Southern Europe²	725	2.7	1,031	3.1	7,247	16.8	6,290	12.2
Greece.....	89	31.6	33	11.9	870	20.2	787	31.2
Italy.....	406	2.2	847	3.4	4,952	17.9	3,872	10.3
Eastern Europe	74	1.3	188	1.7	631	5.0	697	1.0
Middle East²	21,183	66.7	28,641	56.9	4,672	38.6	5,248	43.8
Arabia.....	4,738	67.8	15,310	62.0	564	45.3	810	41.7
Lebanon.....	16,021	89.4	11,322	57.8	346	26.8	376	28.5
Turkey.....	84	11.2	129	18.3	566	87.5	645	72.7
Other Asia²	8,847	6.7	13,420	8.7	11,971	7.2	15,629	7.5
India.....	328	0.9	1,145	3.7	1,452	5.9	1,912	7.4
Malaya and Singapore.....	149	0.5	68	0.2	1,465	42.8	1,717	43.9
Hong Kong.....	121	2.1	292	5.1	1,097	15.1	1,643	23.4
Indonesia.....	78	7.8	61	5.3	477	50.5	937	75.4
Japan.....	7,929	21.6	11,630	19.1	3,267	3.6	5,302	4.1
Thailand.....	25	2.2	58	5.2	926	39.6	393	20.3
Other Africa²	4,524	14.5	3,068	8.7	22,627	30.0	25,288	30.5
Union of South Africa.....	18	0.3	210	2.5	14,873	26.5	17,911	27.7
Other British South Africa.....	—	—	—	—	^a 7.5	4	62.7	
British West Africa.....	2,274	49.0	916	18.1	2,054	67.1	2,767	94.0
Belgian Congo.....	1,705	63.8	1,555	56.7	3,013	85.3	2,053	73.7
French Africa.....	177	5.4	92	4.4	647	55.1	567	54.6
Morocco.....	21	10.8	23	11.6	757	42.3	779	38.4

¹ Less than 0.1 p.c.² Includes other countries not specified.³ Less than \$500.

**9.—Values and Percentages of Trade with Selected Overseas Countries via the United States
1955 and 1956—concluded**

Country	Imports via the United States				Domestic Exports via the United States			
	1955		1956		1955		1956	
	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.	\$'000	p.c.
Oceania¹	1,171	2.5	1,667	3.4	14,396	16.6	12,999	18.2
Australia.....	17	0.1	185	0.7	9,715	16.6	9,532	20.0
New Zealand.....	19	0.2	14	0.1	4,304	19.3	3,117	17.3
Totals, Trade	212,716	4.5	238,619	4.2	137,381	3.2	153,988	3.2

¹ Includes other countries not specified.

**10.—Imports Credited to Countries of Central and South America by Country of
Consignment 1955 and 1956**

Country	1955				1956			
	Consigned from Country Credited		Con- signed from United States to Canada	Total Imports as Credited	Consigned from Country Credited		Con- signed from United States to Canada	Total Imports as Credited
	Direct to a Canadian Port	Via a United States Port			Direct to a Canadian Port	Via a United States Port		
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Central America and Antilles...	83,483	26,090	26,745	136,319	94,232	30,569	38,126	162,928
Bermuda.....	255	2	1	258	265	5	4	273
British Honduras.....	101	36	27	164	98	40	32	171
Bahamas.....	80	151	40	272	126	81	13	221
Barbados.....	8,229	1	7	8,236	4,629	—	5	4,634
Jamaica.....	14,840	1	727	15,567	24,621	1	11	24,633
Leeward and Windward Islands..	2,454	—	2	2,456	2,193	—	1	2,193
Trinidad and Tobago.....	8,115	1,719	6	9,840	9,034	2,005	11	11,051
Costa Rica.....	810	4,400	738	5,948	374	3,011	508	3,893
Cuba.....	7,298	1,384	1,343	10,025	7,890	3,066	1,323	12,279
Dominican Republic.....	920	362	247	1,529	305	113	929	1,346
El Salvador.....	2,021	506	435	2,962	604	337	191	1,133
French West Indies.....	158	—	—	158	1	—	—	1
Guatemala.....	1,080	2,561	905	4,545	724	1,570	933	3,227
Haiti.....	84	243	1,270	1,597	264	146	1,273	1,683
Honduras.....	83	386	1,198	1,666	63	5,577	1,438	7,079
Mexico.....	5,287	5,984	17,543	28,814	6,761	7,062	27,877	41,699
Netherlands Antilles.....	29,791	139	792	30,722	35,298	479	2,342	38,119
Nicaragua.....	786	450	193	1,429	133	246	276	655
Panama.....	570	7,293	1,174	9,037	31	6,713	841	7,585
Puerto Rico.....	520	475	99	1,094	820	117	117	1,054
South America	99,821	148,381	25,455	273,657	121,842	157,848	26,003	305,693
British Guiana.....	17,234	708	365	18,307	18,974	1,190	333	20,498
Argentina.....	2,910	434	1,070	4,414	2,888	660	1,078	4,626
Bolivia.....	3	—	15	19	7	1	81	88
Brazil.....	14,612	5,283	10,852	30,747	19,598	5,350	9,884	34,832
Chile.....	64	28	159	250	1,435	31	238	1,704
Colombia.....	8,146	7,891	6,183	22,220	8,428	6,503	8,125	23,056
Ecuador.....	519	1,504	3,164	5,187	342	1,334	2,822	4,498
Paraguay.....	31	73	133	237	38	65	39	142
Peru.....	216	388	266	869	1,823	320	623	2,766
Surinam.....	2,669	736	241	3,646	2,801	588	536	3,925
Uruguay.....	221	10	252	483	500	115	542	1,157
Venezuela.....	53,197	131,325	2,755	187,277	65,007	141,692	1,702	208,401
Grand Totals	183,304	174,471	52,200	409,975	216,075	188,418	64,129	468,621

¹ Less than \$500.

Section 4.—Trade by Commodities

The tables in this Section provide detailed information on the composition of Canada's imports and exports, with commodities shown by group and individually.

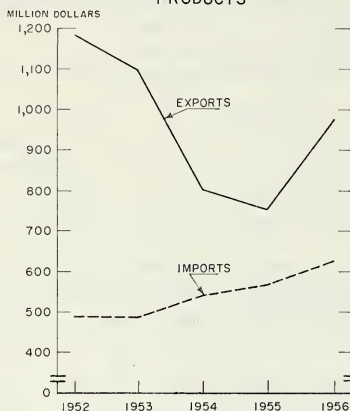
11.—Imports and Exports by Main Group 1954-56

Group	Imports			Domestic Exports			Total Trade ¹		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
United Kingdom.....	392,472	400,531	491,679	653,408	769,313	812,706	1,050,786	1,174,525	1,303,111
Agricultural and vegetable products.....	28,159	29,341	29,927	227,241	272,142	308,731	255,471	301,672	338,937
Animals and animal products.....	10,539	13,251	15,208	21,874	17,859	21,669	32,793	31,772	37,547
Fibres, textiles and textile products.....	89,476	95,396	103,588	1,349	1,779	1,880	91,593	97,671	105,972
Wood, wood products and paper.....	5,108	5,813	6,277	146,657	157,983	135,331	151,815	163,825	141,716
Iron and its products.....	129,895	111,993	162,939	15,515	30,486	37,683	147,496	144,361	202,590
Non-ferrous metals and their products.....	48,998	50,839	72,757	208,950	247,783	264,336	258,339	298,916	337,487
Non-metallic minerals and their products.....	28,490	32,009	34,012	12,271	18,549	19,207	41,143	51,121	53,811
Chemicals and allied products.....	18,590	22,626	22,639	15,676	19,945	21,283	34,439	42,705	43,979
Miscellaneous commodities.....	33,216	30,264	37,333	3,874	2,787	2,587	37,697	42,481	41,071
United States.....	2,961,389	3,452,178	4,161,667	2,317,153	2,559,343	2,818,655	5,328,818	6,064,360	7,040,681
Agricultural and vegetable products.....	251,286	269,514	321,765	213,325	160,528	199,334	466,454	432,756	522,529
Animals and animal products.....	53,147	66,943	73,065	183,721	181,457	177,468	239,448	251,254	253,634
Fibres, textiles and textile products.....	180,813	190,962	190,054	10,720	10,257	11,304	193,706	203,175	203,731
Wood, wood products and paper.....	149,925	176,996	205,508	1,107,411	1,221,026	1,248,918	1,258,017	1,398,887	1,455,496
Iron and its products.....	1,143,658	1,432,479	1,939,666	168,580	225,315	260,665	1,333,465	1,680,037	2,226,555
Non-ferrous metals and their products.....	261,720	289,037	343,180	392,013 ²	470,223 ²	535,759 ²	658,079 ²	764,105 ²	884,091 ²
Non-metallic minerals and their products.....	334,613	350,550	390,618	98,413	149,440	224,840	440,033	508,722	622,996
Chemicals and allied products.....	190,489	222,612	250,365	77,855 ²	85,191 ²	84,975 ²	269,827 ²	309,447 ²	337,172 ²
Miscellaneous commodities.....	395,729	453,085	447,445	65,115	55,906	75,392	469,789	515,977	534,478
All Countries.....	4,093,196	4,712,370	5,705,449	3,881,272	4,281,784	4,789,746	8,040,113	9,063,654	10,568,592
Agricultural and vegetable products.....	540,289	567,475	628,777	803,481	752,348	974,964	1,345,947	1,323,580	1,605,870
Animals and animal products.....	85,412	107,802	122,154	269,861	263,621	260,249	358,353	375,099	386,393
Fibres, textiles and textile products.....	333,324	381,613	416,390	20,969	22,816	22,568	358,216	407,193	442,239
Wood, wood products and paper.....	166,001	195,959	228,208	1,378,354	1,520,921	1,514,458	1,545,164	1,717,869	1,743,948
Iron and its products.....	1,322,497	1,605,968	2,231,354	300,692	398,782	458,849	1,649,116	2,034,010	2,721,720
Non-ferrous metals and their products.....	357,185	398,793	491,539	717,072 ²	852,923 ²	959,471 ²	1,079,513 ²	1,257,602 ²	1,457,030 ²
Non-metallic minerals and their products.....	599,216	663,684	765,971	145,573	206,200	292,100	752,560	879,553	1,066,670
Chemicals and allied products.....	220,406	260,499	288,586	153,238 ²	183,507 ²	182,854 ²	375,567 ²	446,081 ²	473,652 ²
Miscellaneous commodities.....	468,866	530,578	532,469	92,031	80,666	124,233	575,677	622,668	671,070

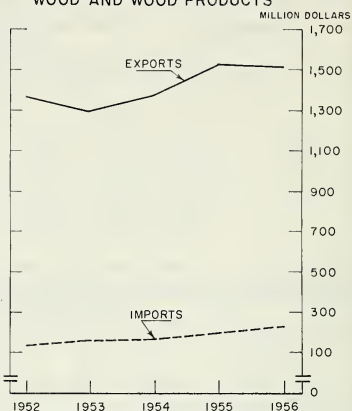
¹ Includes exports of foreign produce.² Revised; uranium ores and concentrates transferred from chemicals to non-ferrous metals as of Jan. 1, 1957.

FOREIGN TRADE BY COMMODITIES, 1952-56

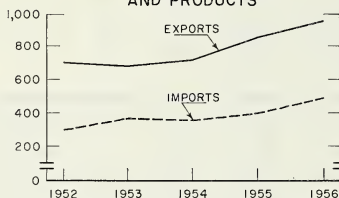
AGRICULTURAL AND VEGETABLE PRODUCTS



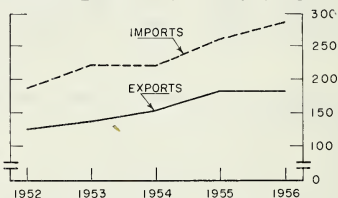
WOOD AND WOOD PRODUCTS



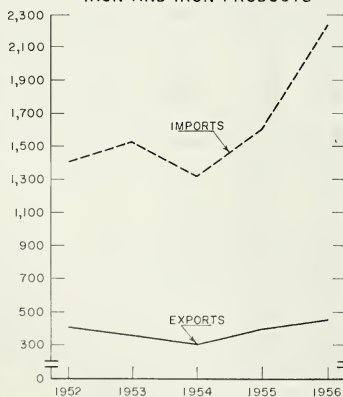
NON-FERROUS METALS AND PRODUCTS



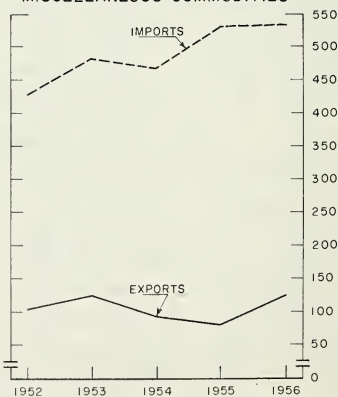
CHEMICAL AND ALLIED PRODUCTS



IRON AND IRON PRODUCTS



MISCELLANEOUS COMMODITIES



12.—Leading Imports 1939, 1946 and 1953-56

NOTE.—Commodities are arranged in order of value in 1956.

Commodity	1939	1946	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Machinery (non-farm) and parts.....	42,831	130,287	401,856	380,219	445,875	628,521
Automobile parts (except engines).....	25,308	66,453	222,284	180,433	246,505	284,788
Petroleum, crude and partly refined.....	39,650	89,483	213,094	212,787	229,779	271,291
Electrical apparatus, <i>n.o.p.</i>	27,891	47,788	198,275	207,539	226,715	257,292
Rolling-mill products (iron and steel).....	32,336	53,376	124,813	97,563	129,679	234,709
Tractors and parts.....	15,003	45,620	126,354	82,814	115,375	159,627
Automobiles, passenger.....	13,725	25,209	79,454	60,846	83,726	125,539
Pipes, tubes and fittings (iron and steel).....	2,340	8,411	58,327	59,680	50,290	123,088
Engines, internal combustion, and parts.....	7,096	19,650	107,736	84,914	100,917	120,986
Coal, bituminous.....	19,640	77,052	94,680	70,445	74,453	96,516
Aircraft and parts (except engines).....	5,550	9,448	111,803	100,397	138,091	91,304
Non-commercial items.....	5,430	14,173	60,923	56,763	72,929	83,098
Fuel oils.....	1,650	33,066	65,151	70,921	77,754	81,593
Tourist purchases.....	9,487	9,125	73,840	68,767	71,467	75,205
Farm implements and machinery (except tractors) and parts.....	5,915	22,732	82,795	60,351	62,874	72,522
Coffee, green.....	4,110	15,473	57,595	64,214	57,010	62,657
Cotton fabrics.....	10,935	54,163	55,906	46,012	53,400	62,130
Paperboard, paper and products.....	8,654	18,834	39,208	43,558	52,690	61,954
Principal chemicals (except acids) <i>n.o.p.</i>	12,321	16,734	54,505	46,193	57,677	61,871
Cotton, raw.....	17,176	42,812	55,494	52,441	61,031	58,748
Sugar, unrefined.....	9,983	32,416	47,491	51,519	52,312	55,828
Parcels of small value.....	4,185	14,460	32,396	40,637	41,639	49,371
Synthetic plastics, primary forms.....	2,506	15,386	32,498	34,893	41,072	47,092
Automobiles, freight.....	1,949	6,493	17,304	15,134	30,442	45,846
Apparel (except hats) of all textiles.....	6,941	12,222	35,672	33,860	39,039	44,793
Refrigerators and freezers.....	1,189	5,201	55,530	38,863	43,935	44,622
Vegetables, fresh.....	6,150	25,748	29,250	33,028	38,852	43,694
Cooking and heating apparatus and parts.....	2,332	10,462	33,538	31,557	36,324	41,717
Rubber, crude and semi-fabricated.....	12,860	10,013	26,408	24,267	44,110	40,610
Logs, timber and lumber.....	3,767	6,035	23,585	23,995	32,773	40,555
Wool fabrics.....	10,408	20,115	41,743	32,367	31,948	40,191
Iron ore.....	4,179	6,467	28,194	20,416	31,563	38,722
Scrap iron and steel.....	2,064	2,163	3,477	2,048	14,356	36,299
Gasoline.....	7,998	14,912	48,650	34,564	35,831	35,217
Newspapers, magazines and advertising matter.....	8,436	13,434	33,446	34,067	34,794	34,435
Tools.....	2,377	10,135	31,004	23,599	26,739	32,779
Citrus fruits, fresh.....	8,860	34,632	26,506	31,272	29,903	32,596
Coal, anthracite.....	21,938	41,987	40,079	33,144	30,124	29,896
Books, printed.....	4,238	11,272	21,378	23,891	26,035	27,950
Drugs and medicines.....	3,992	9,440	22,877	25,328	25,018	26,560

13.—Leading Domestic Exports 1939, 1946 and 1953-56

NOTE.—Commodities are arranged in order of value in 1956.

Commodity	1939	1946	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Newsprint.....	115,687	265,865	619,033	635,670	665,877	708,385
Wheat.....	109,051	250,306	567,907	375,339	338,216	513,081
Planks and boards.....	48,829	125,391	282,736	324,724	385,313	326,445
Wood pulp.....	31,000	114,021	248,675	271,418	297,304	304,536
Aluminum, primary and semi-fabricated.....	25,950	51,390	173,378	182,392	210,971	234,806
Nickel, primary and semi-fabricated.....	57,934	55,205	162,542	182,154	215,169	222,909
Copper, primary and semi-fabricated.....	52,396	34,940	117,351	127,334	163,924	194,206
Iron ore.....	43	4,353	30,843	39,719	99,814	144,443
Petroleum, crude and partly refined.....	1	—	6,228	6,318	36,253	103,923
Asbestos, unmanufactured.....	2,902	23,839	83,973	82,566	94,804	99,895
Barley.....	7,882	9,688	136,729	89,363	76,461	94,977
Zinc, primary and semi-fabricated.....	9,922	27,659	57,572	58,392	70,558	74,011
Wheat flour.....	16,378	126,733	102,160	88,029	74,442	71,549
Whisky.....	7,914	29,650	63,086	59,156	60,682	68,660
Farm implements and machinery (except tractors) and parts.....	6,975	28,662	67,821	70,819	72,206	63,937
Fish, fresh and frozen.....	10,212	31,110	51,219	56,650	55,263	59,594
Pulpwood.....	10,901	28,731	45,859	45,766	48,655	49,794
Aircraft and parts (except engines).....	347	9,507	40,247	28,442	19,906	49,545
Fertilizers, chemical.....	9,179	32,108	42,633	42,342	56,296	49,211
Machinery (non-farm) and parts.....	11,668 ¹	16,675 ²	38,618 ²	38,172 ²	35,789	47,130
Uranium ores and concentrates.....	..	..	..	8,056	26,533	45,777
Flaxseed (chiefly for crushing).....	1	11	11,546	13,717	31,279	43,624
Platinum metals, unmanufactured.....	6,178	15,450	26,290	27,640	26,315	35,656
Lead, primary and semi-fabricated.....	9,850	16,715	37,835	40,530	37,194	35,025
Non-commercial items.....	2,402	39,951	20,295	21,054	25,227	34,000
Scrap iron and steel.....	1,021	166	15,877	15,868	20,936	30,427
Plywoods and veneers.....	1,608	12,026	19,025	21,555	30,104	29,020
Abrasives, artificial, crude.....	4,380	11,727	28,976	27,222	26,942	28,389
Synthetic plastics, primary forms.....	351	1,540	9,456	19,994	27,365	26,577
Fur skins, undressed.....	14,130	30,928	21,070	22,997	28,287	25,893
Rolling-mill products (iron and steel).....	3,864	7,528	16,863	5,393	20,313	25,719
Shingles.....	8,225	11,211	20,913	24,182	29,145	24,546
Fish, cured.....	3,884	13,808	22,271	23,341	23,939	22,835
Electrical apparatus, n.o.p.....	3,229	20,939	37,705	22,913	20,700	21,407
Ferro-alloys.....	2,477	9,485	17,207	6,648	13,165	21,177
Oil seed cake and meal.....	279	58	8,222	7,746	15,431	20,891
Pigs, ingots, blooms and billets (iron and steel).....	2,691	3,328	29,508	11,212	33,695	20,749
Molluscs and crustaceans.....	3,542	14,162	17,588	17,322	20,246	20,554
Non-ferrous ores, n.o.p.....	1,049	1,107	13,306	11,604	14,667	20,406
Automobile parts (except engines).....	2,992	21,110	16,999	15,375	20,333	19,969

¹ Less than \$500.² Revised to include exports of machine needles.

Detailed Imports and Exports.—Detailed statistics of all commodities of any importance imported into Canada from all countries, from the United Kingdom and from the United States during the calendar years 1954-56 are given in Table 14 while corresponding statistics for domestic exports appear in Table 15.

14.—Principal Imports into Canada for Consumption from All Countries, the United Kingdom and the United States 1951-56

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
I. Agricultural and Vegetable Products (except chemicals, fibres and wood)									
A. MAINLY FOOD									
Fruits—									
Fresh.....	74,427,107	73,565,602	81,959,266	9,791	19,891	15,833	48,798,961	47,495,523	55,436,660
Dried.....	13,056,330	14,087,864	12,363,692	17,275	85,017	58	6,667,044	6,292,436	6,639,440
Canned or preserved.....	18,666,327	18,161,043	20,316,256	876,850	939,158	1,078,683	7,695,558	8,702,418	10,538,363
Fruit juices and fruit syrups.....	13,099,921	15,244,970	19,126,273	44,174	52,087	76,942	11,634,106	14,012,202	17,704,319
Totals, Fruits.....	119,249,685	121,059,479	133,765,487	948,090	1,096,753	1,171,516	74,795,669	76,502,579	90,318,782
Cocoanuts and preparations of.....	5,211,915	2,508,506	3,159,372	16,504	26,483	14,850	638,402	510,168	700,824
Nuts, not shelled and shelled.....	17,388,801	16,236,994	17,772,915	150,374	219,825	121,904	4,368,652	2,927,802	4,024,217
Vegetables—									
Fresh.....	34,809,634	41,127,716	47,827,730	1,175	55	23,180	32,030,970	38,410,005	45,234,069
Dried.....	4,478,906	7,675,668	905,854	61,034	47,560	82,883	345,014	561,569	712,449
Canned.....	7,108,557	7,592,552	10,571,160	277,681	238,254	228,801	5,211,241	5,116,228	7,199,358
Pickles, sauces and catSUPS.....	2,126,894	2,383,577	2,721,603	52,896	71,886	74,281	1,583,441	1,741,417	2,046,575
Totals, Vegetables.....	44,523,901	51,759,513	62,026,347	392,809	357,755	409,145	39,170,666	45,829,219	55,192,451
Grains and Farinaceous Products—									
Grain (including rice).....	40,147,749	33,754,233	44,089,274	4,888	29,814	92,045	37,869,095	31,782,457	40,917,869
Biscuits and other bakery products and prepared foods.....	5,711,988	6,241,993	6,328,153	2,351,848	2,957,062	2,717,153	2,930,150	2,912,504	3,222,445
Milled products, and farinaceous products, n.o.p.....	1,259,980	1,422,349	1,590,252	2,777	6,821	6,579	1,130,911	1,313,808	1,548,021
Totals, Grains and Farinaceous Products.....	47,119,717	41,418,575	52,107,679	2,359,513	2,993,697	2,815,777	41,930,156	36,008,769	45,688,345
Oils, vegetable, edible.....	2,322,298	2,967,003	3,393,539	14,860	44,492	36,569	1,657,177	2,265,904	2,856,360
Sugar and Its Products—									
Confectionery, including candy.....	7,062,967	8,495,243	9,007,199	4,355,309	5,117,959	5,002,956	1,626,776	1,998,105	2,545,733
Molasses and syrups.....	3,985,229	4,431,996	4,481,078	36,963	185,292	232,266	1,005,431	936,603	1,441,690
Sugar and sugar products, n.o.p.....	51,721,420	52,669,625	56,183,197	8,868	5,912	11,290	131,162	27,131	117,059
Totals, Sugar and Its Products.....	62,769,616	65,509,864	69,671,474	4,401,140	5,309,163	5,246,512	2,763,869	2,961,839	4,104,452

14.—Principal Imports into Canada for Consumption from All Countries, the United Kingdom and the United States 1954-56—continued

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
I. Agricultural and Vegetable Products (except chemicals, fibres and wood)—concl.									
A. MAINLY FOOD—concluded									
Cocoa beans and cocoa and chocolate preparations	25,135,841	19,883,489	13,830,136	844,803	1,312,520	1,678,350	12,808,784	9,107,710	3,555,735
Coffee and chicory	67,656,952	61,693,683	72,357,670	1,800,016	280,908	323,127	3,825,322	6,280,864	11,248,456
Spices	2,771,920	2,411,055	2,508,589	326,822	305,902	459,363	420,884	495,745	53,150
Tea	23,798,803	25,810,534	24,810,534	2,814,203	2,160,432	1,242,732	53,339	50,536	52,440
Vegetable products, mainly food, <i>n.o.p.</i>	4,270,066	4,808,680	5,255,595	519,840	414,223	425,955	3,647,416	4,223,731	4,603,359
TOTALS, A. MAINLY FOOD	422,219,515	416,071,673	460,659,337	14,588,974	14,502,153	13,945,800	186,080,336	187,164,866	222,878,631
B. OTHER THAN FOOD									
Beverages, Alcoholic—									
Ale, beer, porter and stout	285,780	300,243	307,219	275,190	282,765	282,593		76	218
Whisky and other distilled beverages	15,361,230	15,823,900	16,356,105	9,268,580	9,176,147	9,502,337	1,802,805	2,214,119	1,648,864
Wines	3,895,387	4,018,662	4,674,451	450,486	452,674	509,409	51,863	92,827	141,705
TOTALS, Beverages, Alcoholic	19,542,397	20,142,805	21,337,775	9,994,256	9,911,586	10,294,339	1,854,668	2,307,022	1,790,787
Gums and resins	5,824,937	6,746,989	8,072,384	83,344	175,103	300,862	4,444,951	5,570,798	6,366,181
Oil cake and oil cake meal	5,251,047	7,103,683	12,392,378				5,196,419	7,098,838	12,390,899
Oils, vegetable, not edible	24,143,735	22,529,198	23,077,398	1,221,163	1,749,635	617,644	15,037,790	11,305,409	13,181,473
Plants, shrubs, trees, vines and florist stock	4,240,300	4,670,445	5,719,127	21,183	17,217	29,926	2,057,080	2,428,308	3,229,486
Rubber, crude and partially manufactured	24,266,924	44,110,049	40,609,908	247,208	194,451	716,075	8,410,799	16,422,244	15,754,986
Rubber, manufactures of	21,471,676	30,874,858	36,451,398	1,617,772	2,001,610	2,512,433	18,085,800	25,679,312	30,145,845
Seeds	3,335,102	4,680,184	8,542,505	56,536	378,991	1,028,930	2,365,733	3,303,760	6,504,541
Tobacco, unmanufactured	2,595,914	2,821,996	2,782,264	209,387	258,761	287,494	1,610,287	1,883,239	1,915,636
Tobacco, manufactured	2,218,824	2,883,366	1,990,998	118,948	151,746	287,494	1,550,276	1,615,753	1,470,257
Vegetable products, not food, <i>n.o.p.</i>	5,178,205	5,640,050	7,141,676				4,292,173	4,734,122	6,135,859
TOTALS, B. OTHER THAN FOOD	118,069,061	151,403,623	168,117,811	13,569,797	14,839,100	15,980,762	65,205,976	82,348,805	98,885,950
TOTALS, Agricultural and Vegetable Products	540,288,576	567,475,296	628,777,148	28,158,771	29,341,253	29,926,562	251,286,312	269,513,671	321,764,581

**Animals and Animal Products
(except chemicals and fibres)**

II. Animals and Animal Products (except chemicals and fibres)									
Animals, Living—	1,543,744	1,419,868	1,860,837	223,883	235,358	1,286,158	1,192,493	1,622,460	
Animals, pure bred, for improvement of stock.	1,330,761	2,144,581	2,220,819	22,953	22,953	1,302,574	2,114,824	2,110,277	
Common livestock.	899,695	1,081,103	1,236,474	6,195	6,195	14,829	973,991	990,185	
Animals, living, <i>n.o.p.</i>									
Totals, Animals, Living.	3,774,200	4,645,552	5,318,130	285,505	259,234	359,791	4,281,308	4,722,922	
Fish and Fishery Products, <i>n.o.p.</i> —									
Fish, fresh and frozen.	1,792,918	1,708,152	2,131,895	19,473	4,707	31,860	865,093	1,190,933	
Fish, salted, dried, pickled and smoked.	518,381	592,721	759,787	184,909	139,697	161,228	36,537	36,782	
Fish, canned or preserved, <i>n.o.p.</i>	2,567,592	2,599,094	7,710,668	76,550	76,550	108,936	267,461	220,257	
Molluscs and crustaceans.	2,295,478	3,066,261	3,563,351	1,400	1,400	1,637	1,972,194	2,584,903	
Sponges and other articles of the fisheries, <i>n.o.p.</i>	1,350,607	1,622,236	2,049,454	2,767	2,767	3,054	1,203,279	1,707,224	
Totals, Fishery Products, <i>n.o.p.</i>	8,524,976	9,588,464	16,035,155	225,121	293,636	306,156	4,244,564	5,207,775	
Fur skins, undressed.	14,955,183	20,104,678	19,231,127	2,738,356	1,202,543	3,253,206	12,255,421	13,431,675	
Fur skins, wholly or partially dressed, and manu- factures of fur.	3,954,728	4,743,913	4,600,500	570,508	441,624	137,310	3,085,271	3,819,181	
Hair and bristles, and manufactures of.	1,365,570	1,711,647	1,417,569	519,402	386,385	500,077	416,712	521,920	
Hides and skins, raw (except fur skins).	5,129,397	7,548,611	9,153,659	138,660	36,366	15,635	4,590,757	6,554,242	
Leather, unmanufactured.	7,763,948	9,397,598	10,009,764	4,006,532	4,714,767	3,744,927	4,680,402	4,412,382	
Leather, manufactured.	8,649,631	9,055,459	9,964,298	3,630,672	3,236,095	3,431,805	4,386,648	4,370,881	
Meats, fresh and frozen.	7,045,007	11,293,140	12,570,554	6,831	8,183	4,992	4,405,576	4,128,456	
Meats, other, and preparations of meat.	8,231,571	8,532,130	9,195,544	164,939	117,488	148,252	4,549,646	5,075,752	
Milk and its products.	3,061,863	4,895,003	4,500,193	21,214	47,377	448,142	563,133	752,926	
Oils, fish, seal and whale.	1,836,682	2,522,295	900,963	59,624	32,293	120,825	1,343,306	2,099,815	
Animal oils, fats, greases and wax, <i>n.o.p.</i>	2,065,545	3,087,566	4,325,315	145,601	70,700	171,926	2,821,034	4,041,443	
Gelatine, edible.	1,141,650	1,176,898	1,366,828	239,522	317,753	325,831	1,967,360	2,646,266	
Sausage casings, cleaned.	2,220,576	3,176,610	4,911,164	—	—	38,665	49,186	767,827	
Animal products, <i>n.o.p.</i>	5,691,339	6,407,117	8,562,663	636,609	—	928,892	4,491,158	6,053,413	
Totals, Animals and Animal Products.	85,411,816	107,801,622	122,154,323	10,539,439	13,251,005	15,208,163	53,146,835	73,065,039	
III. Fibres, Textiles and Textile Products									
Cotton—									
Raw and unmanufactured.	54,000,228	62,838,442	60,653,081	188	188	2,959	50,884,274	42,356,563	
Yarn, thread and cordage.	7,855,610	8,815,337	10,300,040	3,766,890	3,766,890	5,490,058	3,960,528	4,387,576	
Piece goods (fabrics).	46,011,962	53,399,704	62,129,799	5,486,654	5,486,654	5,074,325	35,752,050	40,273,448	
Lace and embroideries.	2,348,753	2,076,617	1,842,587	195,131	195,131	126,674	1,112,827	792,373	

III. Fibres, Textiles and Textile Products

III. Fibres, Textiles and Textile Products				
Cotton—				
Raw and unmanufactured.....	54,000,228	62,888,442	60,653,081	198
Yarn, thread and cordage.....	7,855,619	8,815,337	10,300,040	3,766,880
Piece goods (fabrics).....	46,011,922	53,399,704	62,123,739	5,071,157
Lace and embroideries.....	2,348,758	2,076,617	1,842,887	4,271,325
Clothing and wearing apparel.....	2,128,105	9,289,265	12,491,274	5,426,948
Cotton manufactures, <i>n.o.p.</i>	13,019,441	12,708,617	13,443,175	1,112,827
				1,623,716
				1,951,523
				1,946,881
				14,269
				2,959
				50,884,974
				3,960,528
				35,752,050
				1,152,827
				4,256,712
				9,572,285
				1,355,937
				14,099,848
				105,538,671
Totals, Cotton.....	130,354,099	149,177,980	160,859,886	12,755,026
				12,488,847
				102,108,972
				95,434,637
				42,356,562
				4,387,570
				40,273,448
				5,363,583
				5,585,781
				9,223,150
				31,032,342
				41,600,835
				44,314,358
				5,018,171
				5,363,583
				9,223,150
				31,032,342
				41,600,835
				44,314,358
				5,018,171
				5,363,583
				9,223,150
				31,032,342
				41,600,835
				44,314,358
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				5,018,171
				5,363,583
				9,223,150
				31,032,342
				41,600,835
				44,314,358
				5,018,171
				5

14.—Principal Imports into Canada for Consumption from All Countries, the United Kingdom and the United States 1954-56—continued

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
III. Fibres, Textiles and Textile Products—concluded									
Flax, Hemp and Jute—									
Yarn, thread and twine.....	1,793,756	1,923,090	2,046,634	1,160,025	1,284,911	1,364,766	195,507	211,462	202,781
Piece goods (fabrics).....	12,058,776	13,412,259	13,249,072	1,499,954	1,377,760	1,474,064	765,515	913,826	1,065,200
Other flax, hemp and jute and manufactures of.....	6,787,260	7,626,329	9,218,817	2,428,976	2,619,099	2,741,564	2,663,505	2,970,719	3,450,158
Totals, Flax, Hemp and Jute.....	20,639,792	22,961,678	24,514,523	5,088,955	5,281,770	5,580,424	3,614,527	4,096,007	4,749,139
Silk—									
Piece goods (fabrics).....	4,052,874	4,717,914	6,228,254	114,226	97,982	101,868	2,830,895	3,363,753	3,981,639
Clothing and wearing apparel.....	1,825,398	2,125,623	2,094,420	214,908	237,040	245,210	580,913	639,950	734,731
Other silk and manufactures of.....	477,021	426,478	353,812	30,478	11,503	13,106	304,353	317,663	268,737
Totals, Silk.....	6,355,293	7,270,015	8,676,486	359,612	347,125	360,184	3,716,191	4,281,366	5,045,107
Wool—									
Raw and unmanufactured.....	28,491,009	33,491,834	34,749,839	14,766,924	16,198,256	15,804,621	2,582,499	3,502,367	3,940,118
Yarns and warps.....	4,224,752	4,233,544	3,879,136	3,083,429	3,383,469	3,224,743	124,203	138,589	138,589
Piece goods (fabrics).....	32,366,877	31,947,781	40,190,538	29,333,682	28,604,042	35,261,792	1,040,138	887,637	920,951
Carpets and rugs.....	9,565,999	10,164,409	13,634,669	3,634,669	3,565,632	4,336,766	206,282	407,296	407,296
Clothing and wearing apparel.....	12,219,120	12,873,829	14,521,199	9,506,648	9,267,009	9,671,515	973,228	1,061,394	1,190,365
Wool manufactures, <i>n.o.p.</i>	1,614,975	1,721,657	1,671,420	941,420	831,983	894,569	464,217	531,099	531,099
Totals, Wool.....	88,482,772	94,433,054	107,012,080	61,266,772	61,750,391	69,194,006	5,469,691	6,324,674	7,128,418
Synthetic Textile Fibre—									
Unmanufactured synthetic textile fibre.....	3,552,811	6,825,513	7,267,213	1,130,509	2,155,271	1,076,988	1,971,170	4,197,478	5,729,043
Yarn, twist and thread.....	5,644,083	6,902,804	7,647,402	170,229	169,083	248,872	3,889,122	5,257,458	4,947,842
Piece goods (fabrics).....	19,236,662	22,415,131	23,569,720	814,375	908,619	811,101	17,288,502	19,846,133	20,378,154
Clothing and wearing apparel.....	8,778,558	10,814,951	11,460,555	555,225	1,525,887	2,213,068	7,459,064	7,669,922	6,907,902
Synthetic textile fibre manufactures, <i>n.o.p.</i>	3,611,042	4,518,474	5,827,830	278,906	256,358	352,421	3,137,455	3,886,112	4,910,757
Totals, Synthetic Textile Fibre.....	40,823,156	51,506,873	55,762,720	2,949,244	5,015,218	4,702,450	33,695,313	40,857,103	42,873,398
Kapok; manila fibre; sisal, istle and tampico fibres; and other vegetable fibres—not coloured or further manufactured than dried, cleaned, cut to size, ground and sifted.....	6,894,932	7,142,955	7,463,070	28,896	30,016	66,777	1,617,178	1,747,117	1,440,297
Grasses and vegetable fibres, and manufactures of, <i>n.o.p.</i>	900,996	1,147,321	1,257,196	50,912	19,507	63,871	464,856	591,065	657,617

Mixed Textile Products— Rags and waste..... Cordage, rope, twine, threads, fish nets and nettings, and fish lines, <i>n.o.p.</i> Oilcloths and other coated or impregnated cloth..... Lace and embroideries, <i>n.o.p.</i> Hats, caps, bonnets, berets, hoods and shap- es..... Clothing and wearing apparel, <i>n.o.p.</i> Hat braids, hat sweats, etc., for hats and caps..... Totals, Mixed Textile Products.....	8,256,960	9,390,744	8,992,374	404,404	591,381	586,948	6,552,562	7,970,423	7,671,492
	4,206,018	5,796,770	6,218,172	2,217,929	2,659,388	2,729,457	964,097	1,227,107	962,086
Other textile products.....	12,821,775	17,620,232	18,695,940	3,133,636	5,944,025	4,754,790	9,279,969	10,973,422	12,381,454
	2,705,788	2,181,393	2,394,919	197,925	165,093	162,716	1,571,663	1,377,492	1,571,262
Totals, Fibres, Textiles and Textile Prod- ucts.....	2,957,659	3,422,314	4,408,056	279,875	310,986	393,730	1,902,635	2,303,681	2,667,039
	1,879,566	2,211,213	2,483,536	77,292	95,595	1,708,020	1,942,552	2,058,739	2,589,739
IV. Wood, Wood Products and Paper	975,955	1,014,228	890,148	22,516	4,514	7,082	488,858	517,164	500,492
	33,803,721	41,636,894	44,083,145	6,341,406	9,753,279	8,730,318	22,747,804	26,311,841	27,832,504
Wood, Unmanufactured or Partially Manu- factured— Lumber and timber, <i>n.o.p.</i> Plywoods, veneers and other sawmill and planing mill products, <i>n.o.p.</i> Pulpwood and other unmanufactured wood..... Totals, Wood, Unmanufactured or Partially Manufactured.....	5,129,473	6,336,575	6,760,945	635,488	709,484	790,063	3,949,066	4,643,315	4,874,057
	333,324,234	381,613,345	416,390,051	89,476,311	95,393,637	103,537,941	180,813,361	190,362,460	190,954,174
Wood, Manufactured— Barrels, staves, headings and other cooperage. Corks and other manufactures of corkwood or cork bark..... Wood pulp..... Fibre, vulcanized, kartavert, indurated fibre and like material, and manufactures of, <i>n.o.p.</i> Furniture (except of metal)..... Manufactures of wood, <i>n.o.p.</i> Totals, Wood, Manufactured.....	5,450,504	7,957,646	12,414,004	—	287	—	5,450,504	7,955,234	12,411,949
	19,633,633	26,506,419	33,057,885	5,078	2,239	2,536	18,244,266	24,668,952	31,070,892
Paper— Wallboard and other pulpboards and fibre- boards..... Printing paper..... Wrapping and packing paper..... Writing, bond and ledger papers..... Waste paper of all kinds..... Albumenized and other chemically prepared papers for photographers' use.....	3,005,389	4,156,996	6,027,732	5,078	2,239	2,536	1,605,066	1,933,339	3,240,088
	2,404,068	3,019,623	4,181,386	776	213	360	2,224,883	2,556,125	3,872,057
Paper— Wallboard and other pulpboards and fibre- boards..... Printing paper..... Wrapping and packing paper..... Writing, bond and ledger papers..... Waste paper of all kinds..... Albumenized and other chemically prepared papers for photographers' use.....	30,493,604	41,640,684	55,681,007	6,141	23,360	6,194	27,624,749	37,413,650	50,594,986
	1,455,968	1,648,482	2,218,460	13,092	9,381	9,212	1,442,813	1,637,760	2,208,877
Paper— Wallboard and other pulpboards and fibre- boards..... Printing paper..... Wrapping and packing paper..... Writing, bond and ledger papers..... Waste paper of all kinds..... Albumenized and other chemically prepared papers for photographers' use.....	3,912,250	4,987,408	4,356,169	36,113	64,065	71,228	1,900,842	2,338,703	2,072,676
	5,849,889	6,989,204	8,117,220	—	—	1,256	5,679,115	6,989,204	8,115,964
Paper— Wallboard and other pulpboards and fibre- boards..... Printing paper..... Wrapping and packing paper..... Writing, bond and ledger papers..... Waste paper of all kinds..... Albumenized and other chemically prepared papers for photographers' use.....	1,026,955	1,042,590	1,105,602	7,644	13,021	12,197	1,014,538	1,015,085	1,055,854
	4,923,701	5,586,791	6,772,678	154,557	150,765	192,963	4,392,560	4,815,631	5,557,356
Paper— Wallboard and other pulpboards and fibre- boards..... Printing paper..... Wrapping and packing paper..... Writing, bond and ledger papers..... Waste paper of all kinds..... Albumenized and other chemically prepared papers for photographers' use.....	6,725,969	7,968,574	10,353,510	277,679	550,987	316,187	5,460,191	6,237,891	8,521,503
	23,894,742	28,223,049	32,923,639	489,085	788,219	603,043	19,890,089	23,034,274	27,532,230
Paper— Wallboard and other pulpboards and fibre- boards..... Printing paper..... Wrapping and packing paper..... Writing, bond and ledger papers..... Waste paper of all kinds..... Albumenized and other chemically prepared papers for photographers' use.....	12,515,308	14,839,346	18,762,196	68,376	129,798	144,627	12,110,927	14,460,465	17,872,160
	2,818,566	3,571,777	4,602,101	230,413	273,431	357,142	2,579,537	3,286,106	4,229,431
Paper— Wallboard and other pulpboards and fibre- boards..... Printing paper..... Wrapping and packing paper..... Writing, bond and ledger papers..... Waste paper of all kinds..... Albumenized and other chemically prepared papers for photographers' use.....	1,580,296	1,668,203	1,981,367	21,398	29,803	40,263	1,539,871	1,515,877	1,921,752
	739,897	1,095,230	1,330,773	22,278	29,399	22,701	710,182	1,050,586	1,289,497
Paper— Wallboard and other pulpboards and fibre- boards..... Printing paper..... Wrapping and packing paper..... Writing, bond and ledger papers..... Waste paper of all kinds..... Albumenized and other chemically prepared papers for photographers' use.....	1,114,905	1,787,212	2,150,730	—	—	—	1,114,905	1,787,212	2,139,748
	2,532,306	2,643,860	3,540,753	78,002	97,549	86,426	2,142,251	2,306,788	2,896,400

14.—Principal Imports into Canada for Consumption from All Countries, the United Kingdom and the United States 1954-56—continued

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
IV. Wood, Wood Products and Paper—									
Paper—concluded									
Cigarette paper.....	1,337,115	1,402,707	1,543,153	1,242	3,119	365	1,162,676	1,426,976	1,334,245
Cable insulating paper.....	1,096,511	1,535,452	2,015,151	42,278	66,922	111,572	1,054,233	1,468,530	1,835,958
Shipping and other containers of paperboard and fibreboard.....	3,626,462	4,899,815	5,391,240	13,342	41,652	34,878	3,598,691	4,850,121	5,341,776
Paper and manufactures of, <i>n.o.p.</i>	16,196,948	19,256,708	20,899,890	1,118,750	1,257,712	1,315,246	14,665,215	17,511,954	18,886,036
Totals, Paper.....	43,553,314	52,690,400	62,217,354	1,596,079	1,929,385	2,113,220	40,678,488	49,664,615	57,757,003
Books and Printed Matter—									
Newspapers, magazines, charts, maps, music and photographs.....	32,557,740	34,591,319	35,252,580	266,176	259,683	323,965	31,700,990	33,648,972	34,077,351
Printed advertising matter, commercial blank forms, pictorial postcards, and other printed and lithographed matter, <i>n.o.p.</i>	11,553,602	12,713,753	14,088,222	552,281	571,936	610,496	10,766,059	11,844,608	13,105,023
Bibles and prayer books, psalm and hymn books, text books, and other books and pamphlets.....	23,942,818	26,099,315	28,045,500	2,198,333	2,239,927	2,619,895	19,364,890	21,389,435	22,441,169
Totals, Books and Printed Matter.....	68,054,160	73,404,387	77,386,302	3,016,790	3,071,546	3,554,356	61,831,939	66,883,015	69,623,543
Totals, Wood, Wood Products and Paper..	166,009,820	195,958,520	223,208,362	5,108,065	5,812,510	6,276,813	149,925,265	176,995,554	205,507,762
V. Iron and Its Products									
Iron ore.....	20,415,600	31,563,361	38,722,103	—	934	852	19,086,037	30,472,608	36,556,207
Ferro-alloys.....	3,085,000	4,755,719	6,226,437	1,090,915	94,014	660,903	1,951,272	4,411,622	5,100,224
Pigs, ingots, blooms and billets.....	1,850,802	1,899,621	2,905,786	248,143	102,279	113,620	1,291,786	1,784,103	2,573,511
Scrap iron.....	2,048,357	14,355,639	36,299,466	407	2,692	158	1,571,214	14,078,275	36,292,249
Castings and forgings.....	10,303,829	12,900,325	15,687,663	4,436,033	4,240,672	5,323,850	5,627,819	8,380,162	10,088,679
Rolling-Mill Products—									
Bars and rods, including rails.....	11,817,421	16,613,647	29,932,605	2,342,309	2,391,707	5,315,900	8,302,796	13,033,861	20,726,460
Sheets, plates, hoop, band and strip.....	53,265,569	75,234,669	123,631,789	6,303,376	4,647,672	11,506,908	45,332,909	67,859,930	100,587,317
Structural iron and steel.....	32,480,442	37,831,082	81,144,708	1,433,982	991,810	4,566,511	26,109,670	29,189,057	49,558,828
Totals, Rolling-Mill Products.....	97,563,432	129,679,398	234,709,102	10,079,667	8,331,489	21,389,219	79,745,375	110,088,848	170,872,605
Pipes, tubes and fittings—									
Pipes, tubes and fittings.....	59,679,685	50,290,410	123,088,298	10,277,204	8,236,405	17,921,886	43,965,490	33,585,513	89,379,918
Wire.....	9,283,506	13,752,723	17,286,173	3,388,903	4,024,694	5,282,036	4,849,860	8,113,934	9,058,739
Chains.....	3,425,969	4,522,276	5,619,874	581,027	743,995	947,089	2,700,943	3,538,158	4,240,506

Engines, Locomotives and Boilers— Engines, diesel and semi-diesel, and parts, Engines, internal combustion, for motor trucks, motor buses, fire fighting vehicles, ambul- ances and hearse, and parts, Engines, automobile and motor vehicle, and parts, <i>n.o.p.</i> , Engines for aircraft, and parts, Engines, locomotives and boilers, and parts, <i>n.o.p.</i> ,	21,582,759 6,594,777 10,240,692 33,647,856 18,661,013 91,727,097	24,966,278 8,553,226 19,609,424 33,415,169 23,077,582 109,621,679	39,729,131 13,616,851 15,698,808 32,923,385 30,356,334 132,324,509	1,794,110 149,047 187,999 12,074,649 891,417 15,097,222	2,637,262 472,539 343,229 9,060,653 1,027,763 13,541,446	5,178,056 689,705 455,939 5,008,148 841,809 12,173,657	19,514,105 6,438,057 10,045,648 22,570,213 17,426,201 75,994,224	22,036,884 8,025,567 19,228,959 24,254,292 21,896,793 95,472,475	33,998,475 12,888,466 15,119,243 27,848,167 29,433,447 119,317,798
Totals, Engines, Locomotives and Boilers.									
Farm Implements and Machinery— Cream separators and other dairy machinery, Harvesting machinery and implements, <i>n.o.p.</i> , Ploughs, drills and other tillage and planting implements, Harvesters combined with threshing machines, and parts, Seed separation machinery, <i>n.o.p.</i> , Spraying and dusting machines, Tractors, internal combustion, Parts of tractors, internal combustion, and accessories, including parts therefor, Farm implements and machinery and parts, <i>n.o.p.</i> ,	5,254,381 6,719,159 11,005,641 17,435,823 1,129,056 2,416,744 54,647,796 28,164,682 16,390,002 143,163,284	5,229,991 7,500,847 9,061,030 14,886,474 1,363,200 2,713,184 77,671,351 37,702,449 22,119,024 178,247,550	6,118,662 9,044,554 8,927,010 15,222,762 1,533,644 2,142,570 108,999,659 50,626,426 29,533,118 232,148,405	285,513 80,812 82,262 29,452 — 4,540 4,201,010 165,687 353,000 5,192,276	119,003 45,340 78,536 58,482 — 5,927 2,885,095 353,827 352,354 3,898,564	343,212 50,130 91,065 73,556 1,129,056 2,366,712 2,197,935 618,336 328,796 3,728,298	6,300,075 10,892,899 17,353,897 1,362,466 2,675,083 50,176,596 27,968,644 15,952,710 136,760,243	4,475,391 7,378,035 8,967,594 14,803,911 1,533,644 2,088,977 106,528,902 37,310,739 21,707,426 173,116,797	4,836,812 8,896,707 8,823,604 15,110,500 1,533,644 2,088,977 106,528,902 49,885,678 29,015,768 226,730,592
Totals, Farm Implements and Machinery.									
Hardware and Cutlery— Cutlery, Nails, spikes and tacks, Butts, hinges, bolts, nuts, washers, rivets and screws, Hardware, <i>n.o.p.</i> ,	3,636,364 1,174,704 7,633,644 3,928,897 16,373,609	4,124,711 1,244,778 9,958,982 5,448,035 20,776,506	4,758,153 2,141,910 11,786,081 5,958,096 24,644,240	1,263,771 326,305 845,872 740,819 3,176,767	1,147,680 307,245 750,111 906,836 3,111,972	1,044,583 369,487 1,244,140 1,063,082 3,721,302	1,044,643 500,640 6,113,364 2,866,125 10,524,772	1,354,782 494,136 8,373,197 4,225,261 14,447,376	1,582,773 565,185 9,425,132 4,518,112 16,091,202
Totals, Hardware and Cutlery.									
Machinery (except agricultural)— Sewing machines, washing machines, vacuum cleaners and other household machinery, Ore crushers, rock drills, well-drilling and other mining and metallurgical machinery, Office or business machinery, Printing and bookbinding machinery, Air and gas compressing machinery, <i>n.o.p.</i> , Bakery machinery and apparatus, Cranes, hoists and derricks, <i>n.o.p.</i> , and parts, Grain-making and refrigerating machinery, <i>n.o.p.</i> , Logging machinery, Metal-working machinery, Motion-picture projectors and other equipment for moving pictures,	16,670,825 53,724,064 19,188,939 22,766,701 6,136,012 2,879,289 8,116,745 4,659,061 9,107,489 50,130,729 3,631,129	20,283,284 68,723,752 22,335,067 25,565,468 8,015,116 2,592,195 8,040,596 6,206,791 14,491,880 46,410,942 2,810,581	25,258,954 113,436,264 30,874,962 27,036,223 13,954,759 3,380,628 15,263,905 7,981,297 19,749,653 54,162,930 2,761,704	2,285,490 1,084,181 1,677,431 1,762,685 276,638 147,435 822,775 822,775 24,045 4,737,004 204,485	1,830,324 2,076,180 2,232,329 1,544,058 322,320 129,139 614,769 134,632 15,438 3,978,293 86,152	2,253,531 4,749,361 3,610,242 1,800,463 654,016 111,818 1,180,580 1,173,904 231,676 5,813,182 47,438	12,197,984 50,751,186 16,372,455 22,080,270 5,315,332 2,697,937 7,086,016 4,492,267 9,053,323 41,597,590 3,378,264	15,853,665 64,970,563 18,432,907 22,080,270 7,344,076 2,425,168 6,994,749 7,768,672 14,439,982 38,989,287 2,629,568	19,620,236 105,756,676 24,533,447 23,220,355 12,932,038 3,225,598 13,500,691 7,768,672 19,382,099 42,901,184 2,560,553

14.—Principal Imports into Canada for Consumption from All Countries, the United Kingdom and the United States 1954-56—continued

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
V. Iron and Its Products—concluded									
Machinery (except agricultural)—concluded									
Paper mill machines, <i>n.o.p.</i>	5,336,706	7,330,843	12,843,018	1,184,575	1,486,697	1,187,054	4,030,701	5,709,029	11,351,068
Pumps, power, <i>n.o.p.</i>	8,423,698	9,446,918	12,339,863	577,569	566,873	587,357	7,717,804	8,707,312	11,382,816
Concrete road-paving machines and other equipment for road-paving.....	3,805,314	6,934,922	8,440,354	333,500	212,257	130,110	3,769,024	6,701,944	8,249,223
Sand cast rolls and chilled cast iron rolls; and forged steel rolls.....	2,946,337	3,098,555	4,683,307	303,324	354,056	618,637	2,639,433	2,744,235	4,061,465
Shovels, power, and parts.....	12,026,174	22,196,840	34,268,031	502,298	323,699	1,257,618	11,390,470	21,302,061	32,860,530
Yarn, cordage and fabric machinery.....	11,787,013	14,958,532	20,078,371	2,420,249	1,885,991	2,662,870	8,864,970	12,635,700	16,381,945
Air conditioning apparatus.....	8,263,049	7,875,637	15,767,869	234,672	197,676	330,864	7,961,515	7,007,314	18,242,481
Buildozers, earthmovers and parts.....	9,513,800	20,919,477	183,399	183,399	296,584	439,742	9,291,719	13,890,807	20,471,500
Conveying equipment and parts.....	6,079,062	6,834,194	11,511,580	543,101	693,218	555,903	5,301,032	5,991,079	10,871,074
Woodworking machinery, <i>n.o.p.</i> , and parts.....	3,978,562	5,282,632	5,988,331	359,323	446,084	544,263	3,308,373	4,461,669	4,304,834
Machinery and parts, <i>n.o.p.</i>	111,108,601	122,247,451	167,809,547	15,593,279	10,363,514	10,953,686	91,645,883	107,624,510	150,368,585
Totals, Machinery (except agricultural).....	380,219,299	445,875,328	628,520,977	35,112,748	30,198,733	39,894,315	328,431,465	397,630,903	561,795,340
Stamped and coated products.....	12,009,452	14,083,308	14,140,452	411,923	542,979	420,200	11,127,279	13,079,019	13,248,586
Tools and hand implements.....	23,598,533	26,739,006	32,778,745	2,423,571	2,087,480	3,764,791	18,819,270	21,046,347	25,153,770
Vehicles (see also Miscellaneous Commodities)—Automobiles, freight, new.....	15,134,491	30,441,633	45,846,338	400,097	622,364	756,335	14,171,251	28,634,676	43,389,936
Automobiles, passenger, new.....	60,846,411	83,725,656	125,539,468	17,089,234	15,199,271	23,284,600	41,286,346	33,547,805	88,153,676
Automobile parts.....	180,433,400	246,505,302	284,787,685	3,098,654	3,019,957	3,522,562	177,170,641	243,162,021	280,248,407
Factory and warehouse trucks, motor driven, and parts.....	7,518,735	10,304,704	4,649,734	372,553	230,868	82,869	7,112,728	10,071,207	4,555,032
Fork lift trucks and parts.....	—	10,566,520	—	—	—	296,576	—	—	—
Railway cars and parts.....	37,037,696	16,552,738	12,342,728	2,997,070	264,751	368,772	34,015,173	16,287,694	10,251,429
Vehicles and parts, <i>n.o.p.</i>	7,682,090	6,890,413	10,190,862	4,487,044	3,334,648	4,477,197	2,665,572	3,185,311	5,254,615
Totals, Vehicles (see also Miscellaneous Commodities).....	308,632,823	394,420,446	493,913,335	28,444,652	22,671,859	34,788,961	276,421,710	364,878,714	441,807,812
Ball and roller bearings and parts.....	12,193,138	14,977,828	20,238,840	879,945	1,165,624	1,200,475	9,916,479	11,793,461	16,114,194
Bottles, cylinders, drums, barrels and tanks.....	3,356,475	3,967,219	6,214,343	315,063	366,374	525,545	3,010,153	3,551,775	5,669,382
Furniture of metal.....	6,298,742	7,609,325	9,106,210	334,630	259,089	332,390	5,940,467	7,282,258	8,610,248
Guns, rifles and other firearms.....	5,232,651	4,411,732	6,721,510	752,416	246,283	667,451	4,102,442	3,797,930	4,297,711
Scales, balances and strength-testing machines.....	2,619,793	3,574,807	4,264,962	88,688	100,641	178,123	2,424,976	3,206,254	3,846,665
Stoves and other heating and cooking apparatus for electricity, gas, oil, coal, wood or other fuel, and parts.....	31,556,506	36,323,988	41,717,161	519,248	730,772	550,384	30,787,444	35,463,438	41,011,841

Valves, iron.....	7,888,348	12,658,652	305,411	440,465	586,797	7,366,751	7,291,698	11,814,084
Other iron and steel and manufactures of.....	69,951,447	73,839,793	6,738,371	6,252,717	8,726,531	61,240,126	65,937,442	79,995,564
Totals, Iron and Its Products.....	1,322,497,387	1,605,967,680	129,895,260	111,992,672	162,938,833	1,143,657,627	1,432,479,175	1,939,666,457
VI. Non-ferrous Metals and Their Products (except gold)								
Aluminium—								
Bauxite and alumina.....	20,400,990	25,214,769	5,304	8,821	5,071	1,330,003	1,235,555	1,228,798
Aluminium, and manufactures of, <i>n.o.p.</i>	17,112,888	20,722,079	3,692,939	3,568,140	10,088,653	12,379,771	15,562,412	22,560,580
Totals, Aluminium.....	37,513,878	45,936,848	3,698,243	3,576,961	10,043,724	13,709,774	17,097,967	23,789,378
Brass—								
Brass valves.....	3,455,200	4,027,519	106,293	143,737	66,514	3,196,469	3,637,964	4,406,885
Brass, and manufactures of, <i>n.o.p.</i>	14,637,153	15,181,707	1,328,134	1,233,777	1,919,692	12,900,831	13,381,911	15,746,612
Totals, Brass.....	18,092,353	19,209,226	1,434,427	1,367,514	1,986,206	16,097,303	17,019,875	20,153,497
Copper, and manufactures of.....								
Nickel, and manufactures of.....	4,319,816	5,196,015	930,001	638,510	1,779,986	2,427,506	4,492,102	8,543,221
Totals, Copper, and manufactures of.....	4,955,121	5,662,014	323,620	330,435	283,285	4,221,253	4,902,892	6,053,674
Precious Metals—								
Electro-plated ware.....	13,076,079	15,543,409	877,536	1,039,161	1,223,430	11,308,441	12,863,412	13,550,729
Platinum crucibles and other manufactures of.....	18,904,571	16,865,182	17,537,757	15,519,547	19,139,549	1,302,077	1,342,379	1,914,056
Platinum.....	1,017,573	1,128,290	2,003,373	501,084	533,371	421,427	520,254	1,317,027
Totals, Precious Metals.....	32,998,223	33,536,882	18,918,207	17,089,792	20,893,350	13,031,945	14,726,045	16,791,812
Tin, blocks, pigs, bars or granular form.....								
Zinc, and manufactures of.....	7,441,782	8,813,544	817,561	1,238,199	936,951	1,364,728	1,824,042	806,949
Alloys, <i>n.o.p.</i>	2,768,168	3,398,849	82,576	99,678	167,908	2,543,943	3,036,305	3,349,880
Clocks and watches and parts.....	1,279,748	2,198,580	427,776	732,708	1,033,886	746,651	1,182,118	1,522,763
Totals, Tin, Zinc, and Clocks and watches and parts.....	10,655,227	10,843,749	168,247	369,806	401,252	2,938,727	2,851,391	2,989,036
Electrical Apparatus, <i>n.o.p.</i>—								
Batteries.....	2,788,088	3,090,472	263,995	155,189	293,665	2,498,515	2,880,715	2,606,574
Dynamoes or generators, and parts, <i>n.o.p.</i>	9,351,418	10,925,155	916,582	1,994,880	2,783,577	7,856,224	7,743,027	12,593,018
Electric lamps, metal filament.....	1,727,555	2,724,183	52,576	98,915	181,151	1,589,221	2,378,764	3,328,008
Electric motors.....	12,225,203	13,182,484	1,067,572	1,846,462	2,788,056	9,923,403	10,930,563	17,927,653
Telephone apparatus.....	10,514,153	12,222,198	16,477,431	1,869,302	2,208,137	8,536,329	10,189,495	14,124,150
Radio tubes.....	8,903,001	12,623,767	206,061	858,053	191,628	8,756,038	12,323,826	8,476,433
Radio and television sets.....	2,001,601	2,818,611	47,141	36,410	107,138	2,997,723	1,697,122	3,309,538
Radio and wireless apparatus, <i>n.o.p.</i>	4,287,349	76,172,148	5,110,820	5,424,275	6,432,228	68,165,369	69,936,208	56,350,659
Other electrical apparatus, <i>n.o.p.</i>	84,790,877	94,635,025	8,237,582	9,461,024	13,302,152	72,914,003	80,573,583	108,737,026
Totals, Electrical Apparatus, <i>n.o.p.</i>.....	207,539,207	226,715,033	18,643,979	20,941,420	28,113,332	183,180,650	198,671,253	219,846,259

14.—Principal Imports into Canada for Consumption from All Countries, the United Kingdom and the United States 1954-56—continued

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
VI. Non-ferrous Metals and Their Products (except gold)—concluded									
Gas apparatus.....	833,827	1,136,782	2,139,874	65,297	159,733	245,716	751,368	942,943	1,822,456
Stereotypes, electrotypes and other printing materials.....	2,348,133	2,207,896	2,261,230	68,094	50,747	53,074	2,257,810	2,124,781	2,173,719
Chrome ore and ores of metals, <i>n.o.p.</i>	2,425,853	1,833,684	3,896,518	1,187	2,943	3,161	184,207	517,265	1,286,197
Manganese ore.....	2,277,043	7,338,269	9,137,278	14,123	15,338	25,592	1,590,348	1,948,055	4,106,351
Buckles, clasps, eyelets, hooks and eyes, dome, snap or other fasteners, of metal, coated or not, <i>n.o.p.</i> (not being jewellery); slide, hookless, or zipper fasteners.....	1,226,560	1,434,152	1,829,797	99,393	93,916	126,142	1,102,921	1,291,442	1,618,069
Articles, <i>n.o.p.</i> , of metal, not made in Canada, for the construction or equipment of ships.....	6,598,991	5,445,397	6,849,469	1,593,804	1,513,551	2,202,555	4,956,109	3,878,032	4,486,005
Other non-ferrous metals, and manufactures of....	13,911,154	17,905,993	31,362,751	1,710,942	2,678,236	4,455,603	10,614,249	12,550,808	23,841,885
Totals, Non-ferrous Metals and Their Products.....	357,185,144	398,792,913	491,538,617	48,997,777	50,839,437	72,756,723	261,719,648	289,037,396	343,180,131
VII. Non-metallic Minerals and Their Products (except chemicals)									
Asbestos, and manufactures of.....	3,539,132	4,053,832	5,383,635	507,980	610,779	1,377,428	2,966,700	3,334,001	3,731,323
Clay and Manufactures of—									
Clays.....	3,567,597	4,479,827	5,253,300	567,355	734,560	735,108	2,982,757	3,741,676	4,499,997
Bricks and tiles.....	12,685,998	17,138,113	21,789,090	1,082,001	1,331,591	1,585,214	11,053,348	14,922,190	19,124,283
Pottery and chinaware.....	14,899,837	15,549,406	16,296,972	11,295,438	11,322,980	11,737,127	2,097,864	2,488,664	2,607,211
Clay manufactures, <i>n.o.p.</i>	5,526,162	6,780,737	9,256,700	938,133	1,224,032	1,941,377	4,451,570	5,335,100	6,523,068
Totals, Clay and Manufactures of.....	36,679,584	43,998,083	52,596,062	13,832,927	14,613,163	15,998,826	20,585,539	26,487,650	32,955,150
Coal, anthracite.....	33,163,183	30,190,088	30,000,480	3,602,865	3,689,741	2,404,487	29,554,234	26,500,347	27,655,993
Coal, bituminous, and coal, <i>n.o.p.</i>	71,632,015	76,360,834	98,676,190	—	336	987	71,631,679	76,346,943	98,675,203
Briquettes.....	1,583,610	1,536,347	1,581,699	—	13,721	—	1,583,610	1,536,347	1,581,699
Coke.....	8,733,783	11,409,969	13,201,239	4,333	3,280	956	8,715,132	11,406,659	13,200,283
Coal products, <i>n.o.p.</i>	3,589,331	4,050,070	4,333,575	856,453	1,039,744	735,120	2,672,701	2,777,808	2,982,006
Glass—									
Tableware, bottles, flasks, lampbombs, and other glass, cut, pressed or blown.....	14,918,367	17,804,856	20,141,358	1,205,553	1,270,633	1,718,658	12,759,084	15,276,255	16,669,840

Plate, sheet and common, colourless window glass.....	12, 235, 578	18, 177, 098	21, 648, 262	3, 306, 223	4, 783, 817	5, 692, 266	5, 219, 978	7, 935, 768	7, 034, 769
Glass and manufactures of, <i>n.o.p.</i>	6, 801, 991	8, 133, 909	9, 444, 017	486, 671	615, 253	760, 633	5, 243, 146	6, 171, 759	6, 692, 677
Totals, Glass.....	33, 955, 936	44, 115, 763	51, 233, 637	4, 998, 747	6, 609, 703	8, 171, 557	23, 222, 208	29, 383, 782	31, 297, 286
Petroleum and Products—									
Petroleum, crude.....	213, 381, 303	230, 159, 135	271, 571, 304	—	—	—	28, 692, 577	22, 825, 527	18, 901, 328
Fuel oil, <i>n.o.p.</i>	70, 547, 211	77, 675, 611	81, 592, 986	25, 426	—	—	49, 224, 213	42, 854, 738	43, 125, 056
Kerosene, <i>n.o.p.</i>	2, 110, 769	1, 437, 002	2, 333, 654	—	—	—	1, 849, 327	1, 019, 489	1, 734, 724
Gasoline.....	34, 541, 363	35, 819, 139	35, 207, 007	—	—	—	24, 896, 958	24, 285, 788	22, 806, 142
Lubricating oils.....	8, 903, 506	11, 487, 666	13, 006, 148	33, 807	72, 815	88, 013	8, 820, 513	11, 368, 832	12, 871, 460
Petroleum greases and lubricating greases, <i>n.o.p.</i>	1, 547, 172	1, 939, 918	2, 098, 418	6, 702	7, 404	8, 664	1, 913, 052	1, 913, 106	2, 076, 941
Paraffin wax.....	2, 109, 685	2, 659, 343	2, 800, 954	—	410	—	1, 794, 049	2, 299, 221	2, 553, 334
Petroleum products, <i>n.o.p.</i>	11, 846, 351	12, 390, 767	14, 702, 654	19, 871	30, 170	28, 285	11, 582, 736	11, 753, 659	13, 748, 012
Totals, Petroleum and Products.....	344, 987, 390	373, 568, 581	423, 409, 125	85, 806	117, 082	128, 228	128, 378, 425	118, 330, 420	117, 817, 027
Stone—									
Diamond dust and other abrasives.....	11, 630, 199	14, 939, 208	18, 254, 510	620, 695	1, 399, 752	2, 019, 486	10, 155, 015	12, 014, 695	13, 683, 862
Building and paving stone.....	1, 376, 559	1, 300, 971	1, 251, 894	8, 451	2, 007	10, 714	851, 418	836, 532	850, 905
Lime, plaster and cement.....	7, 508, 792	9, 936, 500	10, 758, 729	2, 109, 465	2, 102, 630	1, 299, 258	3, 271, 940	4, 091, 132	4, 066, 247
Phosphate rock.....	4, 577, 633	4, 512, 833	5, 185, 597	—	583	—	4, 192, 358	4, 292, 914	4, 863, 774
Silica sand.....	1, 883, 998	2, 146, 988	2, 587, 392	668	—	—	1, 854, 174	2, 113, 042	2, 594, 632
Roofing granules.....	1, 849, 403	2, 171, 234	1, 961, 971	—	—	—	1, 848, 403	2, 171, 234	1, 961, 971
Stone and manufactures of, <i>n.o.p.</i>	4, 614, 920	5, 327, 737	6, 771, 241	247, 050	219, 278	264, 523	2, 808, 915	3, 519, 930	4, 251, 195
Totals, Stone.....	33, 441, 514	46, 334, 371	46, 781, 244	2, 986, 329	3, 724, 260	3, 563, 981	24, 986, 223	28, 979, 479	32, 272, 886
Diamonds, unset.....	7, 262, 840	9, 227, 293	8, 920, 940	1, 065, 055	1, 064, 775	1, 139, 093	1, 364, 631	2, 375, 738	1, 196, 686
Gas for heating, cooking or illuminating, imported by pipeline.....	2, 028, 647	2, 698, 272	3, 479, 610	—	—	—	2, 028, 647	2, 698, 272	3, 479, 610
Salt.....	2, 151, 428	1, 883, 550	1, 603, 746	153, 187	94, 972	36, 115	1, 692, 709	1, 484, 933	1, 244, 033
Sulphur and bluestone.....	7, 816, 301	9, 386, 983	11, 857, 556	345, 283	367, 642	455, 046	7, 816, 301	9, 386, 983	11, 831, 667
Other non-metallic minerals and manufactures of.....	8, 651, 317	10, 869, 547	12, 850, 231	—	—	—	7, 404, 081	9, 520, 504	10, 697, 489
Totals, Non-metallic Minerals and Their Products.....	539, 216, 011	657, 684, 083	765, 970, 972	28, 439, 891	32, 008, 812	34, 011, 962	334, 612, 340	350, 549, 856	390, 618, 410
VIII. Chemicals and Allied Products									
Acids.....	6, 006, 969	6, 997, 353	7, 340, 309	674, 171	898, 224	1, 059, 525	4, 895, 301	5, 551, 075	5, 438, 936
Alcohols, industrial.....	1, 632, 285	1, 234, 207	1, 402, 718	123	845	1, 200	1, 929, 676	957, 637	1, 395, 520
Drugs, medicinal and pharmaceutical preparations.....	24, 980, 747	24, 599, 475	26, 121, 052	2, 218, 480	2, 171, 544	2, 248, 959	21, 173, 284	20, 485, 853	22, 000, 424
Dyeing and Tanning Materials—									
Coal-tar products.....	7, 348, 695	9, 117, 857	8, 704, 464	961, 450	1, 212, 991	1, 297, 962	4, 610, 713	5, 586, 152	5, 275, 983
Dyeing and tanning materials, <i>n.o.p.</i>	3, 021, 254	3, 628, 287	3, 836, 318	411, 616	575, 167	472, 756	1, 262, 650	1, 419, 302	1, 580, 780
Totals, Dyeing and Tanning Materials.....	10, 369, 949	12, 646, 144	12, 540, 782	1, 373, 066	1, 788, 158	1, 770, 718	5, 873, 363	7, 005, 454	6, 866, 763

14.—Principal Imports into Canada for Consumption from All Countries, the United Kingdom and the United States 1954-56—continued

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
VIII. Chemicals and Allied Products—concluded									
Explosives.....	2,284,557	2,011,468	1,372,258	191,478	243,430	170,384	1,967,433	1,652,361	1,046,553
Fertilizers.....	11,900,069	12,695,280	13,258,248	35,301	43,608	34,706	10,153,631	10,805,533	11,460,584
Pigments, Paints and Varishes—									
Chemical and mineral earth pigments.....	16,454,732	18,969,322	20,516,977	4,323,190	4,878,988	4,860,841	11,991,254	13,845,907	15,357,545
Paints and varishes, <i>n.o.p.</i>	3,665,451	4,266,222	4,980,414	353,922	403,086	472,576	3,263,752	3,803,257	4,443,168
Totals, Pigments, Paints and Varishes.....	20,120,183	23,235,544	25,497,391	4,687,112	5,282,074	5,333,417	15,255,006	17,649,254	19,800,713
Perfumery, cosmetics and toilet preparations.....	1,610,569	1,504,113	1,809,188	97,427	119,664	161,358	1,173,933	912,281	1,068,137
Soap.....	1,159,687	1,501,585	1,951,342	103,505	114,032	165,908	1,014,389	1,347,458	1,737,808
Inorganic Chemicals, <i>n.o.p.</i> —									
Ammonia and its compounds.....	2,707,971	2,501,916	1,952,912	75,384	57,947	58,839	2,599,350	2,410,505	1,835,264
Compounds of bismuth and lead.....	11,525,464	12,826,781	13,474,596	56,380	85,834	84,344	11,469,084	12,739,728	13,389,557
Compounds of bromine, chlorine and iodine.....	1,964,801	2,332,232	2,109,682	3,575	3,586	2,766	1,867,728	2,302,807	2,084,413
Compounds of calcium.....	1,102,409	1,499,216	2,170,599	109,226	121,828	126,647	938,667	1,326,429	1,971,959
Soda and sodium compounds, <i>n.o.p.</i>	14,281,484	17,131,688	17,730,955	2,857,870	3,189,341	2,903,064	10,655,917	12,980,748	14,168,711
Other inorganic chemicals, <i>n.o.p.</i>	3,398,045	4,666,347	4,945,351	950,950	1,328,038	1,155,880	2,091,116	2,993,055	3,427,515
Totals, Inorganic Chemicals, <i>n.o.p.</i>	34,980,174	40,968,180	42,354,125	4,053,385	4,786,574	4,331,490	29,641,892	34,753,272	36,874,419
Chemicals and Allied Products, <i>n.o.p.</i> —									
Glycerine.....	1,076,633	1,816,523	1,413,285	—	—	—	1,076,633	1,472,479	1,413,285
Ink, printing, writing and rotogravure.....	1,175,844	1,367,631	1,354,353	210,003	230,007	198,113	952,971	1,107,846	1,141,880
Butadiene.....	1,314,328	2,889,417	5,296,447	—	—	—	1,314,328	2,889,417	5,296,447
Chemicals for synthetic resins.....	4,508,835	7,512,690	9,828,605	35,893	53,103	17,192	4,031,464	6,849,584	8,767,061
Plastics and products.....	47,967,185	56,799,147	66,030,187	1,634,893	1,721,282	2,046,784	45,947,047	54,032,590	62,943,711
Other chemicals and allied products, <i>n.o.p.</i>	49,318,005	62,719,526	70,956,151	3,275,009	5,202,960	5,099,296	44,588,535	55,139,473	63,113,028
Totals, Chemicals and Allied Products, <i>n.o.p.</i>	105,380,830	133,105,394	154,909,028	5,156,398	7,207,352	7,361,355	97,910,978	121,491,849	142,675,412
Totals, Chemicals and Allied Products.....	220,406,019	260,498,723	288,556,441	48,590,446	22,625,505	22,639,050	190,488,856	222,612,087	256,365,269
IX. Miscellaneous Commodities									
Amusement and Sporting Goods, <i>n.o.p.</i> —									
Bagatelle and other game tables and boards.....	1,687,917	852,407	1,119,384	104,650	88,430	102,505	1,558,577	750,548	1,000,234
Dolls and toys.....	9,293,133	10,080,709	11,141,018	1,835,061	1,989,812	1,769,508	7,458,516	4,912,641	5,199,928
Films.....	8,850,583	10,835,975	12,109,210	568,728	741,852	1,141,433	7,189,749	9,276,692	9,858,329

Sportsmen's fishing rods and tackle, <i>n.o.p.</i>	3,081,052	3,580,664	4,099,711	331,147	296,739	266,651	2,344,868	2,714,104	2,938,958
Other amusement and sporting goods, <i>n.o.p.</i>	625,487	715,628	701,000	148,585	141,907	189,036	427,465	553,515	490,683
Totals, Amusement and Sporting Goods, <i>n.o.p.</i>	23,538,172	26,074,383	29,170,323	2,988,171	3,258,740	3,439,133	16,433,300	18,154,372	19,494,132
Brushes of all kinds.....	1,494,902	1,575,647	1,900,569	500,901	482,495	604,604	804,765	858,542	961,384
Packages and containers, not including contents.....	8,777,640	7,599,018	10,743,882	2,613,648	2,680,057	4,027,009	3,810,655	1,863,277	2,382,494
Household and Personal Equipment, <i>n.o.p.</i>									
Boots, shoes and slippers (except rubber and leather).....	1,311,704	1,419,982	1,302,941	262,688	260,302	230,907	636,457	485,631	418,643
Buttons of all kinds.....	1,383,965	1,428,747	1,633,882	49,146	37,306	53,206	972,276	1,054,886	1,218,132
Cases, boxes and writing desks, fancy.....	2,234,417	2,523,331	2,702,779	369,287	340,715	356,505	1,516,336	1,734,043	1,871,557
Ear-telephone sets and appliances for deaf persons and parts; electronic ear-training persons and parts; thereof designed for use by or for the training of, the deaf.....	1,743,414	1,745,620	2,117,621	10,650	7,904	6,690	1,726,703	1,724,170	2,099,216
Jewellery, <i>n.o.p.</i>	4,843,271	5,511,263	5,802,982	208,285	229,827	237,450	3,152,132	3,399,906	3,449,644
Pocketbooks, portfolios, purses, reticules, card cases, fly books, and musical instrument cases and parts.....	3,249,524	3,936,627	4,737,545	582,548	626,286	692,863	2,505,046	2,505,046	2,943,808
Refrigerators, electric and other and parts.....	38,863,190	43,934,819	44,622,419	455,273	908,582	916,801	38,395,713	43,024,398	43,682,719
Spectacle and eye-glass frames, and parts for.....	2,657,995	2,942,919	3,356,976	15,972	11,581	19,071	2,442,572	2,713,923	3,090,164
Trunks, valises, hat boxes, carpet bags and tool bags.....	990,560	1,366,962	1,863,166	287,393	310,941	317,101	593,425	962,035	1,416,776
Other household and personal equipment, <i>n.o.p.</i>	2,912,204	3,195,082	3,697,670	571,637	597,889	836,044	1,782,169	1,869,148	1,883,409
Totals, Household and Personal Equipment, <i>n.o.p.</i>	60,190,253	68,005,332	71,887,951	2,812,879	3,331,333	3,636,638	53,270,407	59,473,186	62,074,068
Musical instruments and parts.....	7,015,565	7,501,729	8,850,759	911,823	746,757	819,510	4,837,619	5,308,618	6,337,070
Scientific and Educational Equipment—									
Cameras and parts.....	4,257,822	5,813,158	6,393,538	128,467	41,564	33,531	2,503,024	3,528,928	3,400,900
Surgical and dental instruments.....	9,524,654	10,031,414	10,660,582	387,323	357,547	478,685	8,165,788	8,580,063	9,030,708
Optical, philosophical and mathematical instru- ments, <i>n.o.p.</i> , and parts.....	4,325,890	4,261,421	5,458,413	351,688	356,634	500,086	3,260,524	3,049,889	3,756,107
Other scientific and educational equipment, <i>n.o.p.</i>	14,510,214	16,185,751	21,269,561	644,645	773,293	1,239,133	13,165,768	14,471,597	18,589,908
Totals, Scientific and Educational Equip- ment.....	32,618,580	36,291,744	43,782,094	1,512,123	1,559,038	2,251,435	27,125,104	29,630,507	34,777,623
Ships and vessels.....	2,437,229	4,943,884	3,294,955	176,179	461,256	286,970	2,120,343	3,963,825	2,414,398
Vehicles, <i>n.o.p.</i> (see also Iron)—									
Aircraft and parts, excluding engines and parts.....	100,397,031	138,091,289	91,303,918	4,736,060	13,129,655	6,810,659	95,576,483	124,583,389	84,183,674
Other vehicles, <i>n.o.p.</i>	7,485,420	9,199,705	15,621,215	295,397	117,116	138,097	7,117,081	9,048,082	15,432,711
Totals, Vehicles, <i>n.o.p.</i>	107,882,451	147,290,994	106,925,133	5,031,657	13,246,771	6,948,756	102,693,567	133,631,471	99,616,385

14.—Principal Imports into Canada for Consumption from All Countries, the United Kingdom and the United States 1954-56—concluded

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
IX. Miscellaneous Commodities—concluded									
Painting, statues and other works of art.....	3,306,327	3,674,721	5,633,307	693,421	934,022	1,754,010	1,682,224	1,655,530	2,481,269
Articles for representatives of other countries.....	1,192,900	1,283,352	1,252,695	111,077	108,314	123,679	744,814	761,604	721,911
Goods returned within five years after having been exported.....	9,503,386	10,460,554	10,052,436	1,093,056	586,202	339,234	7,360,746	8,672,760	9,179,949
Arms and other goods for British Commonwealth or NATO countries.....	25,006,411	45,362,801	49,303,504	4,109,484	2,255,933	1,952,143	17,395,396	41,541,613	45,232,100
Goods admitted free by Order in Council, <i>n.o.p.</i>	18,291,403	2,137,262	894,693	703,532	158,513	40,608	16,989,656	1,941,805	713,790
Incidental purchases of Canadians returning from other countries.....	68,767,046	71,467,063	75,205,412	1,502,894	1,537,436	1,589,582	66,197,789	68,969,169	72,624,682
Biological products, animal or vegetable, <i>n.o.p.</i> , for parenteral administration in the diagnosis or treatment of diseases.....	1,154,657	1,359,373	1,573,228	18,921	24,003	30,179	1,122,813	1,323,966	1,533,501
Cartridges, metallic and other, and ammunition, <i>n.o.p.</i>	8,023,354	6,717,240	4,178,887	2,696,830	3,022,107	2,712,701	5,256,710	3,622,488	1,498,236
Pens, penholders, pencils and rulers.....	1,777,359	2,024,246	2,612,086	47,221	52,338	70,625	1,535,859	2,383,169	2,340,984
Precious stones, and imitations of (except diamonds).....	1,640,034	1,438,618	1,914,871	83,985	99,448	201,401	524,075	491,438	548,017
Settlers' effects.....	29,904,589	25,618,821	31,830,684	4,324,566	3,378,233	4,490,747	14,854,239	15,622,513	18,692,171
Shipments under \$50 value.....	40,637,367	41,638,548	49,371,409	662,496	658,352	1,238,394	39,630,683	40,536,591	47,141,345
Wax, vegetable and mineral, <i>n.o.p.</i> , and wax and manufactures of, <i>n.o.p.</i>	2,267,763	2,129,567	2,308,594	12,366	17,235	12,120	728,679	662,765	534,560
All other articles imported.....	13,438,943	15,082,956	19,870,967	608,400	670,993	763,445	10,609,980	12,016,144	16,214,146
Totals, Miscellaneous Commodities.....	468,886,331	530,577,853	532,463,689	33,215,636	39,262,941	37,332,923	395,728,823	453,085,353	447,444,815
Grand Totals, Imports.....	4,093,196,338	4,712,370,035	5,705,448,993	392,471,571	400,530,322	484,678,970	2,961,379,507	3,452,178,338	4,161,668,638

15.—Principal Exports of Canadian Produce from Canada to All Countries, the United Kingdom and the United States 1954-56

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
I. Agricultural and Vegetable Products (except chemicals, fibres and wood)									
A. MAINLY FOOD									
Fruits—									
Apples, fresh.....	6,437,846	6,558,549	6,635,250	1,049,877	2,353,119	2,254,828	4,996,976	3,840,771	3,963,980
Berries, fresh.....	4,829,616	2,740,349	2,797,808	—	—	—	4,829,368	2,740,046	2,797,329
Fresh fruits, <i>n.o.p.</i>	2,011,622	1,678,318	531,535	—	8,604	8,859	2,003,267	1,565,736	519,364
Canned or preserved fruits.....	924,200	1,642,579	1,348,513	176,738	477,326	490,424	634,589	612,127	512,113
Fruit juices, fruit syrups, and dried fruits.....	246,098	595,286	478,027	—	—	—	136,596	339,006	374,158
Totals, Fruits.....	14,449,382	12,935,081	11,791,133	1,226,615	2,839,049	2,754,111	12,600,806	9,097,686	8,187,139

15.—Principal Exports of Canadian Produce from Canada to All Countries, the United Kingdom and the United States 1954-56—continued

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
I. Agricultural and Vegetable Products (except chemicals, fibres and wood)—concl.									
B. OTHER THAN FOOD—concl.									
Peat moss and other mosses.....	4,499,952	5,388,362	6,068,845	—	—	—	4,498,695	5,385,671	6,066,393
Fodders, <i>n.o.p.</i>	9,681,970	7,747,708	8,007,924	—	65,521	296,689	8,677,018	6,565,020	6,565,750
Hay.....	2,147,080	3,044,443	3,044,351	—	—	—	4,191,857	2,993,384	3,022,132
Vegetable products, other, not food.....	2,796,314	2,435,364	2,328,678	282,317	296,096	476,726	2,126,282	1,801,343	1,484,003
TOTALS, B. OTHER THAN FOOD.....	155,540,407	189,716,459	214,099,666	25,640,748	47,885,102	59,853,959	95,292,853	88,744,393	100,280,448
Totals, Agricultural and Vegetable Products.....	806,480,837	752,347,975	974,963,582	227,240,965	272,141,502	308,750,603	213,324,705	169,528,464	199,354,471
II. Animals and Animal Products (except chemicals and fibres)									
Animals, Living—									
Cattle, swine, sheep and poultry, pure bred, for improvement of stock.....	4,800,842	6,164,979	6,936,125	500	—	1,000	4,116,013	4,915,109	4,891,581
Cattle, <i>n.o.p.</i>	12,017,811	7,429,001	4,772,751	—	—	—	11,402,722	7,263,346	4,613,947
Horses.....	911,870	7,427,092	698,428	—	—	6,000	11,803,615	773,370	687,358
Other animals, living.....	1,524,676	933,662	940,427	17,527	11,344	14,324	1,431,219	848,171	402,772
TOTALS, Animals, Living.....	19,255,199	15,324,734	12,947,734	18,027	11,344	21,324	18,353,569	13,801,896	10,595,658
Fish and Fishery Products, <i>n.o.p.</i> —									
Fish, fresh and frozen.....	56,649,530	55,262,810	59,594,357	—	24	—	55,844,346	54,460,478	58,695,581
Fish, salted, dried, pickled and smoked.....	23,340,893	23,893,406	22,835,066	—	1	—	5,348,137	3,666,752	5,715,023
Fish, canned or preserved, <i>n.o.p.</i>	25,810,679	26,466,584	17,458,040	10,966,480	4,479,693	7,216,381	3,054,133	3,598,157	2,123,003
Molluscs and crustaceans.....	17,322,280	20,245,785	20,554,159	362,020	317,213	358,570	10,689,352	19,638,267	19,798,267
Other fishery products, <i>n.o.p.</i>	6,757,581	7,622,903	9,434,960	187,584	431,864	486,366	6,061,319	6,587,694	8,228,799
TOTALS, Fishery Products, <i>n.o.p.</i>	129,889,966	125,287,498	129,928,322	11,506,084	5,221,725	8,059,392	87,867,287	89,751,348	94,590,673
Fur skins, undressed.....									
Fur skins, dressed, and manufactures of fur.....	22,906,986	28,288,923	25,893,705	4,111,881	4,652,000	4,224,502	18,582,896	23,133,897	20,831,011
Hides and skins, raw (except fur skins).....	1,315,688	1,838,927	1,839,747	70,329	31,993	2,888	905,481	1,520,980	1,043,868
Leather, unmanufactured.....	8,928,480	9,751,061	10,225,717	388,121	1,380	202,515	388,135	3,529,213	3,691,006
Leather, manufactured.....	7,029,376	7,671,054	8,888,147	1,211,527	1,329,864	1,757,093	3,362,190	3,529,441	3,691,891
Leather, manufactures of.....	2,010,705	2,174,089	2,416,517	1,729,442	1,871,493	1,831,669	3,137,434	3,660,518	4,496,568
				56,920	168,402	228,772	2,098,873	1,446,248	1,592,703

Meats— Fresh, chilled and frozen Bacon and hams, shoulders and sides, cured or smoked..... Meats, other, and preparations of meats..... Totals, Meats.....	22,281,106	18,299,359	16,472,938	1,295,572	3,404	2,568	20,000,912	17,429,853	15,716,353
	6,348,698	6,462,881	5,663,090	—	3,267	63,171	5,639,660	5,671,803	4,757,405
	24,117,776	16,644,925	14,899,029	2,981	58,552	76,408	14,200,741	12,477,181	11,068,125
Milk and Its Products— Butter..... Cheese..... Cream, milk, fresh, and cream..... Milk, processed..... Milk preparations, <i>n.o.p.</i> Totals, Milk and Its Products.....	52,747,580	41,407,165	37,085,087	1,298,553	65,223	142,147	39,841,313	35,578,837	31,541,883
	90,880	2,837,999	824,417	425	357	325	—	208	465
	1,544,281	4,045,411	4,178,143	1,156,462	3,629,666	3,677,059	215,697	259,069	282,914
	908,056	638,020	702,165	72,056	11,076	66,808	794,659	613,960	720,317
	7,621,156	8,045,409	8,931,788	—	—	—	85,629	74,510	85,536
	459,464	439,155	574,195	—	—	—	—	13	—
	10,623,837	16,005,994	15,320,706	1,228,943	3,641,669	3,744,192	1,095,985	947,760	1,089,232
Oils, fish, seal and whale..... Animal oils, fats, greases and wax, <i>n.o.p.</i> Eggs..... Sausage casings..... Horsemeat, not for human consumption, and animal food, prepared..... Animal products, <i>n.o.p.</i> Totals, Animals and Animal Products.....	1,650,807	2,205,378	2,232,033	53,770	36,430	3,893	1,264,334	1,212,307	1,076,628
	2,932,408	3,346,822	4,117,944	—	283,100	1,382,733	232,878	232,278	183,838
	3,655,014	1,850,948	1,909,882	93	—	—	1,336,305	746,704	878,625
	2,302,475	2,360,908	2,201,574	211,540	276,704	298,205	1,269,935	1,204,451	1,300,925
	2,711,354	3,123,891	2,410,214	—	—	—	2,696,646	3,111,530	2,388,896
	1,401,450	1,633,267	1,787,241	10,138	55,324	79,848	1,252,105	1,391,316	1,374,856
	269,361,328	263,621,136	260,249,306	21,874,068	17,859,383	21,669,101	183,721,301	181,456,628	177,468,261
III. Fibres, Textiles and Textile Products									
Cotton— Cotton rags and waste..... Fabrics..... Clothing (including socks and stockings)..... Cotton manufactures, <i>n.o.p.</i> Totals, Cotton.....	569,301	968,805	1,146,498	10,049	187,817	61,651	387,146	578,617	599,243
	926,506	1,098,144	802,263	12,308	15,505	11,092	77,250	63,490	87,179
	409,120	683,369	842,005	60,773	102,145	121,942	30,635	130,090	265,440
	318,712	421,039	685,268	493	1,867	1,882	50,330	90,335	119,140
	2,220,649	3,111,477	3,536,084	84,025	307,334	196,467	515,381	862,532	1,041,002
Flax, Hemp and Jute— Waste bagging and cloth of jute..... Flax, hemp and jute products, other..... Totals, Flax, Hemp and Jute.....	608,078	980,401	855,612	—	—	—	543,893	976,081	855,471
	302,410	179,844	139,255	46,249	76	865	248,975	177,207	191,150
	910,488	1,160,245	1,084,867	46,249	76	865	792,868	1,153,288	1,046,601
Silk and manufactures of (except socks and stockings).....	6,355	10,352	4,292	—	—	—	5,929	6,385	2,646
Wool— Raw wool (includes noils and tops)..... Wool rags and waste..... Wool fabrics..... Clothing (except socks and stockings)..... Wool manufactures, <i>n.o.p.</i> Totals, Wool.....	1,488,774	1,376,922	1,742,293	843,241	803,758	1,050,133	645,532	572,164	600,665
	2,141,446	2,942,963	2,063,268	911	311	27,068	833,364	832,912	912,076
	85,534	61,920	84,471	7,610	5,317	3,103	16,281	13,159	78,220
	1,388,151	1,343,349	1,486,340	2,231	2,127	2,094	1,181,118	1,181,429	1,254,765
	108,239	99,577	115,095	335	1,666	200	98,470	84,069	107,581
	5,209,164	5,824,731	5,511,392	853,417	813,363	1,085,198	2,772,766	2,728,773	2,983,347

15.—Principal Exports of Canadian Produce from Canada to All Countries, the United Kingdom and the United States 1954-56—continued

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
III. Fibres, Textiles and Textile Products—									
concluded									
Synthetic Fibre—									
Fabrics.....	1,078,831	966,482	1,168,044	89,752	78,130	54,524	134,469	38,245	142,735
Clothing (except socks and stockings).....	361,031	344,534	296,634	3,099	2,174	12,830	19,728	13,963	18,746
Synthetic fibre manufactures, <i>n.o.p.</i>	2,871,568	2,994,585	2,218,273	127,623	209,728	40,530	412,616	177,407	547,969
Totals, Synthetic Fibre.....	4,311,430	4,295,551	3,682,951	220,474	290,032	107,884	566,843	229,615	709,450
Cordage, rope and twine, <i>n.o.p.</i>									
Binder twine.....	3,179,023	3,792,958	4,075,217	115	—	—	2,853,654	2,918,082	3,293,049
Bags.....	2,252,516	1,388,684	1,143,513	—	—	—	2,282,277	1,388,684	1,143,513
Felt manufactures.....	446,806	330,264	155,051	—	—	203	96,283	67,403	67,403
Clothing, <i>n.o.p.</i> (including socks and stockings, <i>n.o.p.</i>).....	519,043	611,298	799,350	18,483	31,571	37,442	14,113	22,772	10,086
Oilcloth and linoleum.....	995,463	1,223,285	1,190,471	122,315	323,331	413,661	366,816	361,898	338,213
Textile products, <i>n.o.p.</i>	142,788	149,667	216,692	—	—	—	1,093	658	2,028
Totals, Fibres, Textiles and Textile Products	775,323	917,704	1,198,438	3,783	13,574	38,165	509,899	446,531	666,553
	20,969,078	22,816,126	22,568,238	1,349,461	1,779,281	1,879,885	10,719,922	10,237,038	11,304,171
IV. Wood, Wood Products and Paper									
Wood, Unmanufactured or Partially Manufactured—									
Logs.....	3,860,009	3,459,508	3,197,795	568,715	479,472	627,477	2,881,719	2,586,527	2,260,242
Pit props.....	2,702,642	3,160,576	2,182,411	2,556,218	2,777,658	1,932,070	—	1,026,957	363
Poles.....	3,456,736	3,688,223	4,798,447	—	—	2,135	3,383,313	3,622,405	4,777,129
Railroad ties.....	3,338,874	2,085,421	1,711,099	1,816,102	1,867,306	1,300,340	37,736	35,425	408,509
Billets and blocks.....	1,291,389	1,789,712	1,955,017	128,012	187,787	79,951	1,112,514	1,463,787	1,803,787
Planks and boards.....	324,724,278	385,313,009	326,445,303	68,898,269	70,420,922	40,193,498	225,613,732	273,424,933	252,933,642
Timber, square.....	1,302,463	984,020	1,653,571	257,555	292,890	794,178	162,431	38,769	133,956
Laths.....	1,162,185	1,210,191	1,063,465	—	—	—	1,155,885	1,201,234	1,051,219
Pickets.....	913,182	1,051,053	1,026,957	—	—	—	912,759	1,081,053	1,026,957
Shingles.....	24,181,626	29,148,403	24,546,035	268,550	286,158	308,617	23,578,773	23,202,509	23,856,907
Veneers and plywoods.....	21,555,108	30,103,676	29,020,281	922,233	3,029,448	2,980,221	20,380,052	26,441,473	28,619,223
Christmas trees.....	4,816,366	5,863,523	6,122,608	4,334,710	4,341,016	3,727,177	4,786,217	5,838,728	6,085,985
Pulpwood.....	45,765,692	48,655,140	49,794,173	663,851	587,011	305,020	38,759,540	39,457,420	41,276,505
Spoolwood.....	1,056,343	1,495,815	1,465,838	—	—	—	305,020	354,025	411,431
Wood, unmanufactured, <i>n.o.p.</i>	1,514,268	1,130,539	1,362,538	368	2,815	2,550	1,329,831	1,049,708	1,245,501
Totals, Wood, Unmanufactured or Partially Manufactured.....	441,641,151	518,589,009	456,365,563	80,114,583	84,271,583	52,927,804	324,399,522	384,767,794	362,551,386

Wood, Manufactured—	271,418,005	297,304,069	304,536,497	34,486,399	34,814,098	29,762,920	206,435,403	233,796,779	245,080,531
Wood pulp.....	315,730	855,142	1,153,356	994,166	1,097,911	856	—	844,611	1,138,785
Boors.....	1,132,110	1,183,986	1,450,562	397,341	550,193	532,270	2,424,851	3,261,124	3,613,180
Match splints.....	4,414,434	5,114,850	5,450,562	—	—	—	—	—	—
Manufactures of wood, <i>n.o.p.</i>	—	—	—	—	—	—	—	—	—
Totals, Wood, Manufactured.....	277,280,279	304,468,057	312,281,584	35,877,906	36,462,202	31,314,996	209,148,573	237,902,514	249,832,496
Paper—	6,230,751	10,728,887	14,020,374	1,266,958	3,105,515	7,425,135	4,475,412	7,039,449	6,058,594
Pulpboard, wallboard and paperboard.....	4,540,362	5,917,168	7,137,201	367	37,380	274,518	3,598,065	4,463,487	5,148,988
Book paper.....	635,669,692	665,876,987	708,334,822	28,639,166	33,013,430	41,211,218	588,633,675	578,322,418	615,941,551
Newsprint paper.....	2,333,776	3,206,265	2,719,771	352,936	685,986	684,954	964,717	1,409,225	1,110,264
Wrapping paper.....	—	—	—	—	—	—	—	—	—
Newspaper paper, mutilated or beater stock.....	1,949,553	2,860,533	2,836,158	248,352	89,956	422,254	1,674,838	2,740,965	2,390,757
And waste paper.....	5,214,060	5,649,137	6,193,619	65,910	200,603	533,649	1,476,406	1,277,395	2,144,976
Paper and manufactures of, <i>n.o.p.</i>	—	—	—	—	—	—	—	—	—
Totals, Paper.....	655,938,194	694,238,977	741,291,945	30,573,659	37,132,934	50,871,724	570,823,111	595,252,939	632,804,130
Books, newspapers and other printed and lithographed matter.....	3,494,752	3,625,046	4,518,509	90,953	116,417	216,350	3,040,260	3,103,154	3,729,685
Totals, Wood, Wood Products and Paper.....	1,378,351,376	1,529,321,059	1,514,457,601	146,657,131	157,963,136	135,336,874	1,107,411,466	1,221,026,401	1,248,917,697
V. Iron and Its Products									
Iron ore.....	39,718,740	99,814,106	144,442,550	5,749,364	9,013,015	18,508,953	26,261,974	79,713,357	113,516,437
Ferro-alloys.....	6,648,102	13,164,880	21,176,727	1,755,723	3,364,331	5,733,931	4,452,079	9,085,198	14,128,850
Pigs, ingots, blooms and billets.....	11,212,377	33,694,889	20,748,618	—	6,273,284	1,074,791	10,795,033	24,303,357	16,398,880
Scrap iron.....	15,868,467	20,936,357	30,427,056	5,275,507	5,862,760	3,126,288	4,583,192	11,538,272	11,538,272
Castings and forgings.....	3,831,009	3,963,614	4,216,039	2,409	13,046	3,040,503	3,763,444	3,914,022	4,191,799
Rolling-mill products.....	5,392,665	20,313,001	25,718,617	335,954	3,327,793	5,104,249	2,051,251	5,012,676	3,959,092
Tubes, pipes and fittings.....	587,346	1,292,617	1,471,908	—	3,494	22,052	148,939	254,204	489,939
Engines and boilers and parts.....	23,646,702	30,079,730	30,911,717	297,081	686,839	205,092	8,279,543	11,817,859	10,295,068
Farm implements and machinery and parts.....	70,771,434	76,009,839	67,476,731	184,193	267,382	324,859	53,295,955	63,422,869	55,800,423
Hardware and cutlery.....	735,397	1,265,744	2,355,354	12,293	25,767	22,578	311,696	806,792	1,719,787
Machinery and parts (except agricultural).....	38,172,118	35,788,765	47,129,906	1,469,629	1,123,167	2,942,482	10,416,074	10,868,240	18,993,178
Tools.....	1,445,459	1,495,026	1,986,033	15,831	11,222	10,821	389,749	199,988	468,943
Automobiles freight.....	4,005,705	6,280,788	5,491,076	—	—	—	202,627	224,677	13,376
Automobiles passenger.....	7,722,661	13,164,837	17,026,504	55,649	230,089	193,829	9,136	56,809	56,809
Automobile parts.....	15,374,579	20,332,556	19,969,331	229,617	73,990	30,274	1,228,125	1,503,490	1,887,200
Vehicles and parts, <i>n.o.p.</i> (see also Miscellaneous Commodities).....	4,373,585	6,573,559	3,927,508	20,841	14,579	10,666	1,754,016	2,240,315	2,641,550
Guns, rifles and other firearms.....	39,548,560	4,128,727	637,065	37	14	9,521	38,782,693	3,431,458	6,154
Lamps and lanterns of metal.....	1,474,317	1,195,325	1,013,759	2,149	356	3,310	2,855	2,021	1,355
Stoves and heating apparatus and parts.....	1,063,895	1,351,376	1,546,013	57,370	73,653	112,516	263,826	222,310	167,904
Other iron and steel and manufactures of.....	3,108,618	7,876,659	11,186,203	51,459	121,110	248,717	1,579,897	2,150,820	4,788,962
Totals, Iron and Its Products.....	303,691,737	398,782,425	458,848,742	15,515,166	30,455,891	37,683,631	168,579,766	225,314,722	260,664,614

15.—Principal Exports of Canadian Produce from Canada to All Countries, the United Kingdom and the United States 1954-56—concluded

Item	All Countries			United Kingdom			United States		
	1954	1955	1956	1954	1955	1956	1954	1955	1956
	\$	\$	\$	\$	\$	\$	\$	\$	\$
VI. Non-ferrous Metals and Their Products (except gold)									
Aluminium, and manufactures of	184,514,480	212,726,745	236,163,492	75,271,049	99,056,835	107,884,569	76,892,181	84,408,695	97,276,215
Brass, and manufactures of	6,171,743	7,849,066	6,574,129	290,571	386,603	159,059	2,600,949	3,857,185	2,452,757
Copper, and manufactures of	135,071,429	175,049,866	205,499,681	46,816,310	52,829,453	56,979,361	59,445,804	82,106,578	102,592,425
Lead, and manufactures of	40,503,450	37,217,360	35,046,254	10,585,283	12,946,092	13,437,728	24,356,009	16,909,355	12,681,428
Nickel	182,154,273	215,168,909	222,908,786	35,118,056	40,156,734	41,541,406	123,628,706	145,828,592	143,512,403
Precious metals, and manufactures of (except gold)	48,042,017	46,832,272	55,558,202	17,638,022	15,274,443	20,570,661	29,367,558	30,622,515	33,432,221
Zinc, and manufactures of	58,469,076	70,720,188	74,232,108	16,643,114	20,286,808	15,790,440	38,322,788	47,570,535	54,737,107
Clocks and watches and parts	832,605	692,645	1,031,821	11,792	11,595	12,990	133,109	38,933	121,742
Electrical apparatus, <i>n.o.p.</i> (including radio and wireless)	22,912,591	20,700,255	21,407,292	102,994	150,979	220,857	9,268,942	7,503,338	10,012,573
Printing materials	242,291	287,026	249,795	3,163	29,554	9,968	234,568	236,376	230,231
Uranium ores and concentrates	8,055,655 ¹	26,533,031	45,776,875	—	—	—	8,055,655 ¹	26,533,031	45,776,875
Ores, <i>n.o.p.</i>	11,610,165	14,666,596	20,420,996	165,377	391,132	419,320	10,697,434	11,373,680	13,425,082
Metallic scrap, dross and ashes, <i>n.o.p.</i>	3,310,605	5,049,536	5,248,089	34,895	247,317	38,225	1,952,090	3,215,625	2,890,995
Cadmium	1,208,355	2,275,472	2,824,485	913,334	902,035	1,052,519	234,147	1,200,034	1,706,649
Selenium and salts	1,943,732	2,555,689	6,342,748	1,051,431	1,051,431	2,573,205	1,047,623	1,423,376	3,395,348
Other non-ferrous metals and manufactures of	11,969,943	14,598,143	20,186,377	4,471,721	4,361,657	3,645,313	5,775,124	7,394,682	11,515,334
Totals, Non-ferrous Metals and Their Products	717,072,439²	852,922,799²	939,471,130²	208,949,941	247,752,668	261,335,621	392,012,657²	470,222,560²	535,759,415²
VII. Non-metallic Minerals and Their Products (except chemicals)									
Asbestos, and manufactures of	83,868,863	97,705,882	103,638,075	6,575,333	9,476,516	10,036,464	48,739,222	55,521,776	55,121,512
Gla., and manufactures of	2,223,034	2,653,095	3,340,922	—	2,923	1,512	1,352,194	1,748,227	2,304,911
Coal	1,716,435	4,870,598	4,710,050	230	2,007,945	1,847,775	1,353,639	2,653,106	2,710,961
Coke	2,207,547	2,464,581	2,478,878	497,181	506,717	571,235	1,394,280	1,590,967	1,590,132
Coal products, <i>n.o.p.</i>	433,101	507,614	941,611	—	—	—	433,101	2,347,355	941,540
Glass, and manufactures of	1,368,062	2,016,305	1,145,740	831	—	430	1,049,157	2,347,355	1,080,277
Petroleum and its products	8,676,863	39,919,414	114,948,124	31,706	—	991	5,895,356	35,344,759	111,167,333
Abrastrives	27,782,021	27,460,339	29,181,798	4,461,111	4,177,660	3,781,854	23,012,144	22,886,466	24,723,806
Lime, plaster and cement	5,389,337	8,751,430	9,736,675	33,232	46,987	4,159	5,721,901	5,825,276	6,659,901
Stone and its products, <i>n.o.p.</i>	2,347,881	6,926,652	8,318,354	14,776	46,987	34,704	2,270,271	3,825,800	6,894,669
Carbon and graphite electrodes	1,251,411	2,945,511	2,822,932	318,220	1,848,696	2,268,832	3,274	5,700	858,327
Sulphur	1,085,729	2,777,465	388,300	388,300	4,626,202	508,970	993,833	1,296,684	1,373,863
Salt	25,935	1,090,501	2,256,830	—	—	—	14,445	1,988,480	2,270,882
Other non-metallic minerals and manufactures of	6,634,905	6,191,408	5,342,463	9,967	22,260	100,472	5,430,540	5,895,423	4,993,493
Totals, Non-metallic Minerals and Their Products	145,573,124	206,199,645	232,092,867	12,270,887	18,518,911	19,207,318	98,413,470	149,439,625	224,839,607

¹ October to December 1954.² Revised because of transfer of uranium ores and concentrates from Chemicals to Non-ferrous Metals as of Jan. 1, 1957.

VIII. Chemicals and Allied Products

Acids.....	1,711,072	1,872,877	2,180,661	161,365	208,871	203,715	955,479	1,369,430	1,891,573
Alcohols, industrial.....	360,112	762,045	482,988	161,673	81,246	297,996	21,257	536,251	177,530
Drugs, medicinal and pharmaceutical preparations.....	5,475,727	4,247,962	5,349,076	25,804	16,032	33,078	634,906	683,862	1,686,587
Fertilizers.....	42,342,394	56,296,164	49,210,599	78	51,308	—	39,166,183	44,575,301	41,920,478
Paints and varnishes.....	1,380,644	1,724,141	2,085,817	11,418	1,583	—	626,156	1,031,316	1,251,842
Calcium compounds.....	2,436,420	2,805,619	2,025,369	803,980	1,585,895	653,753	236,168	161,120	5,087,357
Soda and sodium compounds.....	6,542,815	8,291,702	6,878,198	—	2,207	203,414	5,435,327	6,731,443	—
Soda ash and cobalt salts.....	1,454,648	2,894,384	2,315,141	1,425,254	2,894,130	2,310,741	11,000	25,732	4,400
Inorganic chemicals, <i>n.o.p.</i>	285,581	561,259	1,296,452	—	116	3,227,897	261,176	555,113	1,281,228
Plastics and products.....	13,309,767	21,577,140	21,934,361	3,227,897	2,408,863	1,132,315	920,856	1,123,619	2,610,552
Polystyrene.....	7,488,917	7,009,108	6,174,136	280,696	400,167	1,552	11,639	45,884	4,461
Chemicals and allied products, <i>n.o.p.</i>	70,449,530	75,464,636	82,898,539	9,548,396	12,114,452	16,444,281	29,524,662	28,413,835	28,897,572
Totals, Chemicals and Allied Products.....	153,237,627	183,507,040	182,854,337	15,676,361	19,944,870	21,282,503	77,854,806	85,191,429	84,974,700
IX. Miscellaneous Commodities									
Toys, dolls and other amusement and sporting goods, <i>n.o.p.</i>	582,108	988,980	1,349,352	51,959	53,099	41,056	338,077	654,534	989,915
Brushes.....	369,741	295,966	144,352	—	99	—	172,979	142,669	14,357
Containers, <i>n.o.p.</i>	2,185,947	3,612,038	3,730,965	62,640	34,122	11,138	466,266	477,315	646,285
Household and Personal Equipment, <i>n.o.p.</i> —	1,381,269	1,106,325	1,177,765	145,284	227,723	116,890	22,014	19,359	51,708
Pens, pencils and parts.....	287,493	529,379	398,004	279	354	641	106,442	151,165	40,407
Power-operated refrigerators and parts.....	619,680	613,194	799,617	18,377	45,653	61,630	111,336	119,521	155,551
Other household and personal equipment, <i>n.o.p.</i>	—	—	—	—	—	—	—	—	—
Totals, Household and Personal Equipment, <i>n.o.p.</i>.....	2,288,442	2,248,898	2,375,379	164,540	273,730	179,161	239,792	290,075	247,666
Musical instruments and parts.....	603,604	621,746	655,539	663	2,934	1,626	579,169	579,926	596,094
Cameras, films and other philosophical and scientific apparatus.....	5,078,749	5,507,320	6,343,796	524,913	549,973	579,421	1,535,622	1,840,126	1,894,493
Ships and vessels and materials for ships.....	8,755,257	6,310,700	8,517,829	10,744	1,291	3,226	1,791,106	1,998,058	1,711,784
Aircraft and parts.....	28,442,248	19,905,785	49,544,897	674,596	188,274	156,526	25,122,914	17,490,030	28,611,138
Vehicle and parts, <i>n.o.p.</i> (see also Iron).....	248,997	185,232	178,626	111	—	—	162,875	140,974	154,687
Carriages.....	13,803,510	3,565,156	226,287	—	2,228	168	13,239,164	3,437,689	18,305
Electrical energy.....	7,422,471	10,615,715	15,194,769	1,564,388	1,540,111	—	7,420,276	10,613,380	15,192,877
Settlers' effects.....	17,261,419	21,908,433	27,697,288	1,540,388	1,540,111	1,443,412	12,778,763	16,642,275	22,357,317
Gifts and donations.....	3,792,953	1,547,585	1,606,477	149,175	130,901	149,175	147,744	125,956	130,767
All other articles exported.....	1,195,859	3,382,461	6,667,424	8,401	10,244	22,226	1,120,007	1,473,040	2,826,329
Totals, Miscellaneous Commodities.....	92,031,308	89,666,017	124,232,590	3,873,922	2,787,006	2,587,138	65,114,754	55,905,975	75,392,014
Grand Totals, Exports.....	3,884,271,854	4,234,784,253	4,789,745,693	653,407,992	769,312,648	812,706,074	2,317,152,877	2,558,342,842	2,818,655,010

Section 5.—Imports and Exports by Degree of Manufacture, by Origin and by Purpose

The tables in this Section present Canada's trade according to three alternative classifications other than the classification by component material used in Section 4.

16.—Imports according to Degree of Manufacture by Leading Countries 1955 and 1956

Country	1955			1956		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
North America¹	431,476	122,059	2,902,640	488,491	173,038	3,503,977
United States	431,193	122,040	2,898,945	488,181	173,014	3,500,472
Central America and Antilles¹	71,824	22,741	41,754	88,031	24,599	50,297
Barbados	—	5,761	2,474	—	2,660	1,973
Jamaica	7,991	6,347	1,229	12,430	10,906	1,297
Trinidad and Tobago	7,780	1,396	665	7,916	2,046	1,089
Cuba	2,216	5,663	2,145	2,328	6,448	3,503
Honduras	1,644	22	—	7,068	11	1
Mexico	25,512	260	3,042	38,456	292	2,951
Netherlands Antilles	276	—	30,447	155	—	37,964
Panama	8,919	2	117	7,573	—	11
South America¹	242,513	8,910	22,233	274,272	10,273	21,149
British Guiana	9,469	7,758	1,080	9,343	9,375	1,779
Argentina	1,381	7	3,027	2,136	78	2,413
Brazil	26,295	1,047	3,405	30,732	745	3,355
Colombia	22,202	3	15	22,973	1	82
Ecuador	5,168	1	18	4,471	2	25
Venezuela	173,261	—	14,017	197,106	—	11,295
Northwestern Europe¹	18,972	46,813	506,573	23,468	51,548	662,020
United Kingdom	11,898	39,955	348,679	13,328	44,405	426,946
Belgium and Luxembourg	639	2,969	25,443	782	3,535	48,411
Denmark	898	30	3,342	1,249	14	4,920
France	440	1,241	23,335	335	1,205	31,060
Germany, Federal Republic	1,004	664	53,935	3,876	709	84,763
Netherlands	3,228	1,777	15,947	3,071	1,374	19,331
Sweden	567	79	11,506	517	133	16,653
Switzerland	71	9	19,285	87	3	22,211
Southern Europe¹	2,408	3,230	21,567	1,815	3,135	28,508
Italy	1,660	1,473	15,369	1,207	1,560	22,200
Spain	560	1,591	4,070	344	1,399	3,985
Eastern Europe¹	909	437	4,363	1,199	1,189	8,913
Czechoslovakia	109	20	2,750	137	10	5,528
Middle East¹	27,302	111	4,356	47,258	178	2,906
Arabia	6,983	—	2	24,709	—	3
Lebanon	17,909	—	11	19,588	—	13
Other Asia¹	40,714	11,965	78,454	37,275	14,821	102,448
Ceylon	2,418	3,051	10,111	1,064	3,619	11,881
Hong Kong	1,434	39	4,402	1,227	25	4,447
India	4,721	1,369	29,057	3,290	284	27,323
Malaya and Singapore	25,171	3,335	304	22,360	5,811	387
China	844	15	2,267	2,467	14	3,240
Japan	3,498	1,936	31,284	3,872	2,443	54,511
Other Africa¹	16,632	11,859	2,621	19,146	13,313	2,768
British East Africa	—	—	—	6,220	14	1,056
Mauritius and Seychelles	4,513	7,739	906	5	7,753	—
Union of South Africa	3,040	1,901	1,314	2,834	4,155	1,412
Oceania¹	14,953	16,825	15,156	16,008	19,029	14,376
Australia	6,515	9,120	10,660	8,127	8,367	9,816
Fiji	2	5,015	1	—	6,265	2
New Zealand	8,317	2,592	1,408	7,755	4,173	393
Totals, Imports	867,703	244,949	3,599,718	996,963	311,122	4,397,363

¹ Includes other countries not specified.

² Less than \$500.

17.—Exports of Canadian Produce according to Degree of Manufacture by Leading Countries 1955 and 1956

Country	1955			1956		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
North America¹	541,191²	983,552	1,037,288²	697,322	1,019,072	1,106,965²
United States.....	539,959 ²	983,403	1,035,981 ²	696,387 ²	1,018,914	1,103,354 ²
Central America and Antilles¹	7,285	12,933	101,273	8,323	15,610	112,866
Barbados.....	336	590	3,341	408	686	3,627
Jamaica.....	1,125	207	11,574	1,301	406	15,515
Trinidad and Tobago.....	1,796	483	10,346	2,082	589	9,820
Cuba.....	1,571	1,684	10,655	367	1,845	13,159
Dominican Republic.....	176	165	3,827	245	186	4,554
Mexico.....	438	5,042	31,647	1,535	6,731	31,119
Panama.....	73	19	2,732	81	54	7,613
Puerto Rico.....	348	2,865	6,502	1,039	2,973	6,409
South America¹	10,329	13,535	70,456	13,134	15,201	72,773
British Guiana.....	478	105	2,383	724	96	3,532
Argentina.....	504	2,789	3,540	112	2,960	3,111
Brazil.....	139	2,433	8,948	353	3,366	9,308
Chile.....	11	1,265	2,545	41	1,027	3,352
Colombia.....	2,115	3,506	17,071	967	2,851	13,771
Peru.....	631	1,464	3,907	4,286	1,440	5,612
Venezuela.....	2,505	1,550	26,700	3,545	2,399	28,391
Northwestern Europe¹	490,209	417,761	198,532	605,626	395,628	229,396
United Kingdom.....	294,950	349,704	124,658	330,726	324,761	157,219
Austria.....	3,257	1,388	1,380	1,670	1,861	1,683
Belgium and Luxembourg.....	36,823	7,138	9,423	42,905	6,709	8,238
France.....	9,308	16,003	17,252	16,434	19,255	17,467
Germany, Federal Republic.....	53,681	23,646	13,424	91,746	27,084	15,267
Ireland.....	7,146	2,533	3,129	6,209	1,222	2,713
Netherlands.....	26,496	11,033	10,159	35,887	8,668	10,004
Norway.....	41,578	383	5,070	54,738	239	2,706
Sweden.....	1,003	2,028	4,591	2,712	1,931	3,251
Switzerland.....	14,835	2,970	7,834	21,349	3,212	8,975
Southern Europe¹	11,853	14,159	17,233	18,922	19,468	13,163
Italy.....	6,811	10,145	10,697	14,202	15,267	8,276
Spain.....	57	2,585	1,568	261	2,727	2,065
Eastern Europe¹	4,891	3,828	3,951	69,882	1,264	1,700
Czechoslovakia.....	34	461	567	24,373	73	111
Poland.....	3,447	540	17	17,788	113	17
Union of Soviet Socialist Republics.....	—	2,290	390	23,726	710	169
Middle East	2,622	2,417	7,069	2,056	2,728	7,203
Other Asia¹	73,302	19,356	74,694	85,908	45,169	76,001
India.....	689	5,194	18,786	138	7,341	18,235
Hong Kong.....	750	782	5,722	946	793	5,287
Pakistan.....	9	564	5,628	1,595	16	8,891
Japan.....	71,498	10,481	8,913	82,852	34,728	10,290
Philippines.....	79	418	17,639	82	886	17,093
Other Africa¹	10,298	18,606	46,458	10,034	15,104	57,695
Federation of Rhodesia and Nyasaland.....	380	2,523	1,419	698	2,382	1,599
Union of South Africa.....	9,285	13,751	32,990	8,915	10,623	45,079
Oceania¹	2,590	29,095	55,016	1,571	20,585	49,379
Australia.....	2,355	24,185	31,942	1,406	15,234	31,108
New Zealand.....	72	3,003	19,269	29	3,071	14,894
Totals, Exports	1,154,571²	1,515,244	1,611,969²	1,512,776²	1,549,829	1,727,140²

¹ Includes other countries not specified. ² Revised: uranium ores and concentrates transferred from fully and chiefly manufactured to raw materials as of Jan. 1, 1957.

18.—Imports according to Origin, by Group and Degree of Manufacture 1955 and 1956

Origin	1955			1956		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Farm Origin						
CANADIAN FARM PRODUCTS—1						
Field Crops—						
Raw materials.....	522	94,539	103,194	1,333	122,457	131,830
Partly manufactured.....	62	6,558	7,659	114	12,079	12,948
Fully or chiefly manufactured.....	24,794	38,381	74,503	23,955	44,201	80,723
Totals, Field Crops.....	25,378	139,477	185,356	25,403	178,736	225,501
Animal Husbandry—						
Raw materials.....	2,619	24,350	45,862	3,107	29,956	52,680
Partly manufactured.....	18,327	8,241	31,275	18,272	8,216	32,799
Fully or chiefly manufactured.....	50,492	16,730	91,472	59,349	19,238	105,202
Totals, Animal Husbandry.....	71,437	49,322	168,609	80,727	57,410	190,681
All Canadian Farm Products—						
Raw materials.....	3,141	118,889	149,055	4,440	152,413	184,511
Partly manufactured.....	18,389	14,799	38,933	18,386	20,295	45,747
Fully or chiefly manufactured.....	75,286	55,111	165,976	83,304	63,439	185,925
TOTALS, CANADIAN FARM PRODUCTS.....	96,815	188,799	353,964	106,131	236,146	416,183
FOREIGN FARM PRODUCTS—1						
Field Crops—						
Raw materials.....	1,065	97,865	250,830	2,135	82,799	250,557
Partly manufactured.....	1,623	13,199	78,126	598	15,221	83,188
Fully or chiefly manufactured.....	28,792	136,158	256,457	30,103	155,922	285,941
Totals, Field Crops.....	31,480	247,222	585,414	32,836	253,942	619,686
Animal Husbandry—						
Raw materials.....	1,778	6,668	9,353	2,415	6,380	9,647
Partly manufactured.....	4	26	57	—	29	50
Fully or chiefly manufactured.....	527	7,174	10,766	427	8,051	12,365
Totals, Animal Husbandry.....	2,308	13,868	20,177	2,842	14,460	22,061
All Foreign Farm Products—						
Raw materials.....	2,843	104,533	260,183	4,550	89,179	260,203
Partly manufactured.....	1,627	13,225	78,183	598	15,250	83,238
Fully or chiefly manufactured.....	29,319	143,332	267,224	30,530	163,973	298,306
TOTALS, FOREIGN FARM PRODUCTS.....	33,788	261,090	605,590	35,678	268,402	641,747
ALL FARM PRODUCTS—						
All Field Crops—						
Raw materials.....	1,587	192,403	354,024	3,468	205,255	382,387
Partly manufactured.....	1,685	19,757	85,785	713	27,300	96,136
Fully or chiefly manufactured.....	53,585	174,539	330,961	54,058	200,123	366,664
Totals, All Field Crops.....	56,858	386,699	770,769	58,239	432,678	845,187
All Animal Husbandry—						
Raw materials.....	4,396	31,018	55,215	5,522	36,336	62,327
Partly manufactured.....	18,330	8,268	31,332	18,272	8,245	32,849
Fully or chiefly manufactured.....	51,019	23,905	102,239	59,776	27,289	117,567
Totals, All Animal Husbandry.....	73,746	63,190	188,785	83,570	71,870	212,742

For footnote, see end of table.

**18.—Imports according to Origin, by Group and Degree of Manufacture
1955 and 1956—concluded**

Origin	1955			1956		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Farm Origin—concl.						
All Farm Products—						
Raw materials.....	5,983	223,421	409,239	8,990	241,591	444,714
Partly manufactured.....	20,016	28,024	117,117	18,985	35,545	128,985
Fully or chiefly manufactured.....	104,605	198,444	433,200	113,834	227,411	484,231
Totals, Farm Origin.....	130,604	449,889	959,555	141,809	504,548	1,057,930
Wildlife Origin						
Raw materials.....	1,021	8,893	11,376	853	7,676	10,071
Partly manufactured.....	139	2,161	2,367	47	2,494	2,664
Fully or chiefly manufactured.....	190	622	822	57	543	636
Totals, Wildlife Origin.....	1,350	11,677	14,566	958	10,713	13,371
Marine Origin						
Raw materials.....	54	3,171	4,201	81	3,720	5,072
Partly manufactured.....	—	—	—	—	—	—
Fully or chiefly manufactured.....	375	6,133	10,093	399	4,730	13,993
Totals, Marine Origin.....	429	9,303	14,294	480	8,450	19,065
Forest Origin						
Raw materials.....	²	10,013	10,176	²	15,289	15,598
Partly manufactured.....	36	37,576	41,655	26	48,342	53,140
Fully or chiefly manufactured.....	5,785	132,620	148,581	6,280	145,269	164,393
Totals, Forest Origin.....	5,822	180,209	200,413	6,306	208,900	233,131
Mineral Origin						
Raw materials.....	4,788	185,510	432,471	3,404	219,392	520,698
Partly manufactured.....	19,147	45,558	73,644	24,732	78,080	116,409
Fully or chiefly manufactured.....	182,747	1,908,687	2,249,268	253,137	2,448,393	2,943,911
Totals, Mineral Origin.....	206,633	2,139,756	2,755,383	281,273	2,745,865	3,581,019
Mixed Origin						
Raw materials.....	50	185	240	—	512	811
Partly manufactured.....	616	8,720	10,165	615	8,553	9,924
Fully or chiefly manufactured.....	54,978	652,439	757,754	53,238	674,125	790,198
Totals, Mixed Origin.....	55,644	661,344	768,160	53,853	683,190	800,933
Recapitulation						
Raw materials.....	11,898	431,193	867,703	13,328	488,181	996,963
Partly manufactured.....	39,955	122,040	244,949	44,405	178,014	311,122
Fully or chiefly manufactured.....	348,679	2,898,945	3,599,718	426,946	3,500,472	4,397,363
Grand Totals.....	490,531	3,452,178	4,712,370	484,679	4,161,667	5,705,449

¹ In this classification the expression "Canadian Farm Products" refers to all commodities of which the basic raw materials are such as Canadian farms produce. "Foreign Farm Products" covers materials or commodities such as Canada does not produce in their original forms, e.g., cane sugar, tea, rubber, cotton, silk, etc.

² Less than \$500.

**19.—Exports according to Origin, by Group and Degree of Manufacture
1955 and 1956**

Origin	1955			1956		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Farm Origin						
CANADIAN FARM PRODUCTS—1						
Field Crops—						
Raw materials.....	231,492	80,962	551,192	257,245	109,494	758,780
Partly manufactured.....	2	3,445	7,966	—	3,663	8,617
Fully or chiefly manufactured.....	40,018	71,041	181,525	50,914	80,635	195,099
Totals, Field Crops.....	271,509	155,448	740,684	308,158	193,792	962,496
Animal Husbandry—						
Raw materials.....	2,717	38,463	52,318	3,461	34,399	49,050
Partly manufactured.....	1,879	5,167	11,616	1,554	6,085	11,667
Fully or chiefly manufactured.....	4,191	21,971	44,957	5,495	19,998	43,245
Totals, Animal Husbandry.....	8,786	65,601	108,890	10,510	60,482	103,962
All Canadian Farm Products—						
Raw materials.....	234,209	119,426	603,510	260,706	143,893	807,830
Partly manufactured.....	1,879	8,612	19,582	1,554	9,749	20,284
Fully or chiefly manufactured.....	44,208	93,011	226,482	56,409	100,632	238,344
TOTALS, CANADIAN FARM PRODUCTS.....	280,296	221,049	849,574	318,669	254,274	1,066,458
FOREIGN FARM PRODUCTS—1						
Field Crops—						
Raw materials.....	—	—	—	—	310	310
Partly manufactured.....	191	1,944	2,342	62	1,864	2,425
Fully or chiefly manufactured.....	740	9,035	18,448	930	9,496	19,140
Totals, Field Crops.....	931	10,979	20,790	991	11,671	21,875
Animal Husbandry—						
Raw materials.....	—	—	—	—	—	—
Partly manufactured.....	—	—	—	—	—	—
Fully or chiefly manufactured.....	—	6	10	—	3	4
Totals, Animal Husbandry.....	—	6	10	—	3	4
All Foreign Farm Products—						
Raw materials.....	—	—	—	—	310	310
Partly manufactured.....	191	1,944	2,342	62	1,864	2,425
Fully or chiefly manufactured.....	740	9,041	18,458	930	9,499	19,144
TOTALS, FOREIGN FARM PRODUCTS.....	931	10,985	20,801	991	11,673	21,879
ALL FARM PRODUCTS—						
All Field Crops—						
Raw materials.....	231,492	80,962	551,192	257,245	109,805	759,090
Partly manufactured.....	192	5,389	10,309	62	5,527	11,042
Fully or chiefly manufactured.....	40,757	80,075	199,973	51,843	90,131	214,239
Totals, All Field Crops.....	272,441	166,427	761,474	309,150	205,462	984,371
All Animal Husbandry—						
Raw materials.....	2,717	38,463	52,318	3,461	34,399	49,050
Partly manufactured.....	1,879	5,167	11,616	1,554	6,085	11,667
Fully or chiefly manufactured.....	4,191	21,977	44,967	5,495	20,001	43,249
Totals, All Animal Husbandry.....	8,786	65,608	108,901	10,510	60,485	103,966

For footnotes, see end of table.

**19.—Exports according to Origin, by Group and Degree of Manufacture
1955 and 1956—concluded**

Origin	1955			1956		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Farm Origin—concluded						
All Farm Products—						
Raw materials.....	234,209	119,426	603,510	260,706	144,203	808,140
Partly manufactured.....	2,070	10,556	21,924	1,615	11,612	22,709
Fully or chiefly manufactured.....	44,948	102,052	244,940	57,339	110,132	257,488
Totals, Farm Origin.....	281,227	232,034	870,375	319,660	265,947	1,088,337
Wildlife Origin						
Raw materials.....	4,657	23,235	28,409	4,229	20,879	25,967
Partly manufactured.....	25	918	1,498	10	553	1,311
Fully or chiefly manufactured.....	7	413	440	3	491	528
Totals, Wildlife Origin.....	4,689	24,566	30,347	4,242	21,923	27,807
Marine Origin						
Raw materials.....	18	75,039	76,123	1	79,176	80,417
Partly manufactured.....	26	654	680	—	601	601
Fully or chiefly manufactured.....	5,214	15,920	51,340	8,062	16,450	51,702
Totals, Marine Origin.....	5,258	91,612	128,144	8,063	96,227	132,720
Forest Origin						
Raw materials.....	7,619	52,013	65,426	6,304	55,057	66,826
Partly manufactured.....	110,474	536,026	718,250	75,852	526,109	666,912
Fully or chiefly manufactured.....	39,918	633,384	737,761	53,190	667,826	780,843
Totals, Forest Origin.....	158,012	1,221,422	1,521,437	135,346	1,248,993	1,514,582
Mineral Origin						
Raw materials.....	48,447	267,675 ^a	378,530 ^a	59,486	395,268 ^a	529,621 ^a
Partly manufactured.....	237,109	434,838	772,268	247,274	479,427	857,409
Fully or chiefly manufactured.....	16,225	173,592	358,641	17,636	174,923	371,032
Totals, Mineral Origin.....	301,781	876,105^a	1,509,438^a	324,396	1,049,618^a	1,758,062^a
Mixed Origin						
Raw materials.....	—	2,572	2,574	—	1,803	1,805
Partly manufactured.....	—	411	624	9	611	887
Fully or chiefly manufactured.....	18,345	110,620 ^a	218,847 ^a	20,990	133,533 ^a	265,546 ^a
Totals, Mixed Origin.....	18,345	113,603^a	223,044^a	20,999	135,947^a	268,239^a
Recapitulation						
Raw materials.....	294,950	539,959 ^a	1,154,571 ^a	330,726	696,387 ^a	1,512,776 ^a
Partly manufactured.....	349,704	983,403	1,515,244	324,761	1,018,914	1,549,829
Fully or chiefly manufactured.....	124,658	1,035,981 ^a	1,611,969 ^a	157,219	1,103,354 ^a	1,727,140 ^a
Grand Totals.....	769,313	2,559,343	4,281,784	812,706	2,818,655	4,789,746

¹ In this classification the expression "Canadian Farm Products" refers to commodities actually produced, in their original state, on Canadian farms. "Foreign Farm Products" covers materials or commodities such as Canada does not produce in their original forms, e.g., cane sugar, tea, rubber, cotton, silk, etc. ² Less than \$500. ³ Revised: uranium ores and concentrates transferred from Mixed Origin to Mineral Origin as of Jan. 1, 1957.

20.—Imports according to Purpose by Group 1955 and 1956

Group and Purpose	1955			1956		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Producers' Materials	155,092	890,281	1,469,626	203,162	1,120,409	1,866,963
Farm Materials—						
Fodders.....	56	15,076	15,141	3	28,228	28,540
Fertilizers.....	154	11,088	13,094	162	11,797	13,750
Seeds.....	379	3,250	4,509	1,029	6,463	8,365
Other.....	805	9,968	12,027	1,020	10,373	13,080
Totals, Farm Materials.....	1,393	39,383	44,771	2,214	56,862	63,735
Manufacturers' Materials—						
Foods and beverages.....	270	4,472	9,655	460	3,405	11,015
Tobacco, smokers' supplies.....	—	1,883	2,822	—	1,916	2,782
Textile, clothing, cordage.....	64,955	141,178	278,623	71,705	135,534	297,671
Fur and leather goods.....	7,214	29,910	42,713	8,307	29,985	44,620
Sawmills.....	—	—	—	—	—	—
Rubber industries.....	660	19,294	47,567	1,088	19,872	45,850
Other manufactures.....	62,184	522,694	871,040	85,863	664,402	1,112,212
Totals, Manufacturers' Materials.....	135,283	719,431	1,252,420	167,424	855,114	1,514,149
Building and Construction Materials.....	18,382	128,899	169,794	33,477	205,933	286,468
Other Producers' Materials.....	33	2,569	2,641	47	2,501	2,611
Producers' Equipment	68,199	844,294	953,853	90,498	1,129,982	1,284,428
Farm.....	4,664	177,921	186,475	4,472	231,920	241,555
Commerce and industry.....	63,535	666,373	767,379	86,027	898,062	1,042,873
Fuel, Electricity and Lubricants	3,792	198,071	248,572	2,512	222,890	277,148
Fuel.....	3,712	184,110	234,466	2,415	207,379	261,482
Electricity.....	—	679	679	—	562	562
Lubricants.....	80	13,282	13,428	97	14,948	15,105
Transport	46,739	558,208	613,939	48,732	603,298	672,095
Road.....	23,414	382,815	414,234	33,835	471,068	523,868
Rail.....	265	16,574	16,839	2,369	10,307	12,695
Water.....	870	9,951	11,360	709	9,891	11,304
Aircraft.....	22,190	148,868	171,506	11,819	112,032	124,227
Auxiliary Materials for Commerce and Industry	4,772	38,235	47,333	6,738	45,633	58,452
Advertising material.....	435	6,899	7,528	423	7,249	7,930
Containers.....	4,148	23,104	31,275	6,054	27,908	39,658
Other.....	190	8,232	8,530	262	10,476	10,864
Consumer Goods	89,448	513,647	912,236	94,755	565,973	1,001,452
Foods.....	12,565	155,077	317,419	13,087	178,564	348,200
Beverages.....	12,380	24,219	124,649	11,932	32,435	139,511
Smokers' supplies.....	415	3,234	4,130	549	3,130	4,343
Clothing.....	18,584	23,800	54,806	20,209	23,470	61,347
Household goods.....	30,513	153,714	206,956	31,355	169,802	228,785
Jewellery, timepieces, etc.....	1,946	10,583	29,189	2,189	9,811	31,795
Books, educational supplies, etc.....	3,829	57,291	66,031	5,183	59,554	70,930
Recreational equipment, etc.....	4,596	41,545	53,038	4,760	41,001	54,923
Medical supplies, etc.....	3,038	35,043	42,435	3,756	37,643	46,313
Other.....	1,582	9,138	13,583	1,735	10,564	15,843
Munitions and War Stores, n.o.p.	5,696	50,412	58,121	5,406	51,692	61,028
Live Animals for Food	1	1,027	1,028	3	1,898	1,901
Unclassified	26,793	358,004	407,663	32,874	419,891	481,982
Totals, Imports	400,531	3,452,178	4,712,370	484,679	4,161,667	5,705,449

1 Less than \$500.

21.—Exports according to Purpose by Group 1955 and 1956

Group and Purpose	1955			1956		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Producers' Materials	703,757	2,073,813¹	3,396,921¹	734,886	2,293,448¹	3,833,469¹
Farm Materials—						
Fodders.....	66,485	53,217	143,310	64,396	71,487	170,194
Fertilizers.....	52	45,152	56,877	14	42,331	49,641
Seeds.....	1,595	10,002	17,466	1,236	12,415	19,141
Other.....	2	1,577	1,594	—	1,643	1,722
Totals, Farm Materials.....	68,132	109,948	219,247	65,646	127,876	240,698
Manufacturers' Materials—						
Food and beverages.....	148,274	11,558	339,216	176,850	20,239	515,368
Tobacco, smokers' supplies.....	22,332	8	26,555	12,824	13	17,332
Textiles, clothing, cordage.....	1,118	1,944	9,402	1,201	2,617	8,308
Fur and leather goods.....	7,953	30,962	47,539	7,541	29,575	46,369
Sawmills.....	772	2,625	4,444	1,422	2,394	4,851
Rubber industries.....	4	440	449	—	407	414
Other manufactures.....	379,326	1,595,501 ¹	2,295,826 ¹	425,509	1,813,455 ¹	2,608,923 ¹
Totals, Manufacturers' Materials.....	559,777	1,643,039 ¹	2,723,431 ¹	625,348	1,868,700 ¹	3,201,565 ¹
Building and Construction Materials.....	75,816	319,271	451,450	43,889	294,873	387,578
Other Producers' Materials.....	32	1,555	2,793	2	2,000	3,628
Producers' Equipment	8,542	139,354	213,678	10,032	144,131	224,770
Farm.....	287	76,506	91,378	362	69,451	84,249
Commerce and industry.....	8,255	62,848	122,300	9,670	74,680	140,521
Fuel, Electricity and Lubricants	4,288	19,830	26,422	3,154	29,777	37,625
Fuel.....	4,288	9,210	15,607	3,154	14,562	22,063
Electricity.....	—	10,613	10,616	—	15,193	15,195
Lubricants.....	—	7	199	—	22	368
Transport	507	23,669	89,089	389	35,143	121,395
Road.....	319	3,991	48,338	233	4,125	49,818
Rail.....	—	223	14,680	—	737	13,575
Water.....	2	1,965	6,166	2	1,670	8,456
Aircraft.....	188	17,490	19,906	157	28,611	49,545
Auxiliary Materials for Commerce and Industry	801	5,184	10,984	765	5,889	11,358
Containers.....	801	5,183	10,868	764	5,887	11,250
Other.....	—	1	116	2	1	107
Consumer Goods	36,864	221,383	395,643	41,097	235,097	409,039
Foods.....	33,649	143,777	286,905	40,000	145,397	286,138
Beverages.....	889	58,283	66,056	1,173	66,628	74,724
Smokers' supplies.....	65	24	445	70	30	342
Clothing.....	851	3,568	6,728	1,021	3,999	7,314
Household goods.....	98	1,836	8,202	428	2,067	8,817
Jewellery, timepieces, etc.....	47	55	864	55	150	1,224
Books, educational supplies, etc.....	492	3,952	8,341	608	4,866	9,434
Recreational equipment, etc.....	586	8,323	11,620	538	9,580	13,320
Medical supplies, etc.....	173	1,483	5,976	176	2,187	7,155
Other.....	13	81	416	28	193	570
Munitions and War Stores, n.o.p.	2	6,869	7,694	10	24	853
Live Animals for Food	—	4,994	5,137	—	1,058	1,165
Unclassified	14,551	64,247¹	136,216¹	19,374	74,087¹	150,072¹
Totals, Exports	769,313	2,559,343	4,281,784	812,706	2,818,655	4,789,746

¹ Revised: uranium ores and concentrates transferred from unclassified to producers' materials as of Jan. 1, 1957.² Less than \$500.

Section 6.—Comparison of Value, Price and Volume of Foreign Trade

In the postwar period there has been a substantial increase in the value of Canada's exports and imports. Changes in the value of trade, however, are the joint product of changes in the volume of goods traded and of the prices at which transactions are conducted. To assess the significance of value changes it is desirable to isolate the contributions made to them by the price and volume factors.

Special indexes of export and import prices have been developed to provide this information. These indexes are based chiefly on unit values (average prices) calculated from the trade statistics, supplemented by information on wholesale and retail prices. Price relatives are calculated for a sample of commodities representing the greater part of export and import trade, and these relatives are weighted by the percentage of 1948 trade represented by each commodity in the sample in obtaining group and total indexes. By dividing these price indexes into the trade values the effects of price change are removed from the values, or by dividing the price index into an index of values on the same time-base an index is obtained showing changes in the volume of trade from year to year.

The grouping of commodities used in these calculations differs slightly from that of the regular trade statistics, changes being desirable to simplify the pricing problem. The chief difference is that the first two main groups of the trade statistics have been combined into one group, "agricultural and animal products", and that the sub-group "rubber and its products" has been transferred from this group to the "miscellaneous group".

The import totals differ from those usually published by the exclusion of certain goods brought into Canada by the governments of the United Kingdom and other NATO countries for the use of their defence forces. Table 22 shows the value of trade adjusted for pricing purposes, and the value, price and volume indexes of Canadian trade for 1953-56. In the period covered by this table there was relatively little change in import prices; they remained at around the level of 1952 to which they fell from a sharp peak in 1951. Export prices, also at a record level in 1951, declined gradually during the following three years but turned upward in 1955. The role of somewhat lower prices in accentuating a volume decline of about the same magnitude is illustrated for exports in 1954. But in 1955 and 1956 it was higher volume that contributed most to the significant value gains of both exports and imports.

22.—Declared Values, and Value, Price and Physical Volume Indexes of Foreign Trade by Commodity Group 1953-56

Commodity Group ¹	1953	1954	1955	1956
DECLARED VALUES				
	\$'000	\$'000	\$'000	\$'000
Declared Values of Imports.	4,382,830	4,093,196	4,712,370	5,705,449
Agricultural and animal products.....	526,025	579,962	600,292	673,870
Fibres and textiles.....	387,115	333,324	381,613	416,390
Wood products and paper.....	154,445	158,912	188,431	220,279
Iron and steel and products.....	1,521,044	1,312,976	1,597,472	2,221,640
Non-ferrous metals and products.....	376,170	368,638	411,512	503,327
Non-metallic minerals and products.....	654,524	594,638	659,171	760,785
Chemicals and fertilizer.....	225,785	224,984	265,012	293,772
Miscellaneous.....	507,986	494,755	563,504	566,081
Totals, Adjusted Imports ²	4,353,094	4,068,190	4,667,007	5,656,145
Imports for use of U.K. and NATO Governments.....	29,736	25,006	45,363	49,304

For footnotes, see end of table, p. 1044.

22.—Declared Values, and Value, Price and Physical Volume Indexes of Foreign Trade by Commodity Group 1953-56—concluded

Commodity Group ¹	1953	1954	1955	1956
DECLARED VALUES—concluded				
	\$'000	\$'000	\$'000	\$'000
Declared Values of Exports²	4,117,406	3,881,272	4,281,784	4,789,746
Agricultural and animal products.....	1,339,348	1,062,206	1,006,146	1,225,876
Fibres and textiles.....	24,333	20,969	22,816	22,568
Wood products and paper.....	1,295,396	1,378,354	1,520,921	1,514,458
Iron and steel and products.....	376,891	307,537	402,957	465,712
Non-ferrous metals and products ⁴	682,183	717,072	852,923	959,471
Non-metallic minerals and products.....	147,393	145,573	206,200	292,100
Chemicals and fertilizer ⁴	137,885	153,238	183,507	182,854
Miscellaneous.....	113,977	96,323	86,314	126,707
VALUE INDEXES (1948=100)				
Imports²	165.2	154.4	177.1	214.7
Agricultural and animal products.....	130.5	143.9	149.0	167.2
Fibres and textiles.....	110.4	95.1	108.8	118.8
Wood products and paper.....	218.9	225.3	267.1	312.2
Iron and steel and products.....	194.2	167.6	203.9	288.6
Non-ferrous metals and products.....	240.5	235.7	263.1	321.8
Non-metallic minerals and products.....	108.5	98.6	109.3	126.1
Chemicals and fertilizer.....	186.2	185.5	218.5	242.2
Miscellaneous.....	347.9	338.9	386.0	387.7
Domestic Exports³	133.9	126.2	139.2	155.7
Agricultural and animal products.....	128.1	101.6	96.2	117.3
Fibres and textiles.....	53.4	46.0	50.1	49.5
Wood products and paper.....	135.8	144.5	159.5	158.8
Iron and steel and products.....	103.9	84.7	111.0	128.3
Non-ferrous metals and products ⁴	172.3	181.1	215.4	242.3
Non-metallic minerals and products.....	155.3	153.4	217.2	307.7
Chemicals and fertilizer ⁴	172.7	191.9	229.8	229.0
Miscellaneous.....	117.4	99.2	88.9	130.5
PRICE INDEXES (1948=100)				
Imports²	109.4	109.5	110.5	113.0
Agricultural and animal products.....	97.4	104.4	99.8	99.9
Fibres and textiles.....	100.4	99.8	95.5	89.2
Wood products and paper.....	117.1	117.5	119.4	123.8
Iron and steel and products.....	120.1	120.4	125.2	133.2
Non-ferrous metals and products.....	119.7	120.4	124.8	132.8
Non-metallic minerals and products.....	104.8	102.1	100.6	102.0
Chemicals and fertilizer.....	109.4	108.1	109.9	111.7
Miscellaneous.....	111.0	105.3	119.7	118.3
Domestic Exports³	118.3	115.1	117.7	121.3
Agricultural and animal products.....	103.5	96.8	96.5	95.7
Fibres and textiles.....	114.1	108.6	106.4	108.7
Wood products and paper.....	118.3	116.3	118.0	120.1
Iron and steel and products.....	134.2	132.3	134.8	143.1
Non-ferrous metals and products ⁴	135.0	134.6	149.4	165.0
Non-metallic minerals and products.....	149.5	150.2	149.9	156.1
Chemicals and fertilizer ⁴	117.1	115.0	114.8	114.0
Miscellaneous.....	123.6	123.5	125.2	126.6
VOLUME INDEXES (1948=100)				
Imports²	151.0	141.0	160.3	190.0
Agricultural and animal products.....	134.0	137.8	149.3	167.4
Fibres and textiles.....	110.0	95.3	113.9	133.2
Wood products and paper.....	186.9	191.7	223.7	252.2
Iron and steel and products.....	161.7	139.2	162.9	212.9
Non-ferrous metals and products.....	200.9	195.8	210.8	242.3
Non-metallic minerals and products.....	103.5	96.6	108.6	123.6
Chemicals and fertilizer.....	170.2	171.6	198.8	216.8
Miscellaneous.....	313.4	321.8	322.5	327.7

For footnotes, see end of table, p. 1044.

**22.—Declared Values, and Value, Price and Physical Volume Indexes of Foreign Trade
by Commodity Group 1953-56—concluded**

Commodity Group ¹	1953	1954	1955	1956
	VOLUME INDEXES—concluded (1948=100)			
Domestic Exports²	113.2	109.6	118.3	128.4
Agricultural and animal products.....	123.8	105.0	99.7	122.6
Fibres and textiles.....	46.8	42.4	47.1	45.5
Wood products and paper.....	114.8	124.2	135.2	132.2
Iron and steel and products.....	77.4	64.0	82.3	89.7
Non-ferrous metals and products ⁴	127.6	134.5	144.2	146.8
Non-metallic minerals and products.....	103.9	102.1	144.9	197.1
Chemicals and fertilizer ⁴	147.5	166.9	200.2	200.9
Miscellaneous.....	95.0	80.3	71.0	103.1

¹ Groups, though classified by component material, differ slightly from conventional groups (see text, p. 1042).

² Excludes imports for the use of the United Kingdom and other NATO Governments. ³ Excludes exports of foreign produce.

⁴ Revised for 1954 to 1956: uranium ores and concentrates transferred from chemicals to non-ferrous metals as of Jan. 1, 1957.

PART III.—EXTERNAL TRANSACTIONS*

Section 1.—Canadian Balance of International Payments

A summary of Canada's total commercial and financial transactions with other countries is presented in statements of the Canadian Balance of International Payments. The current account statement, covering all current exchanges of goods and services, indicates the main categories of transactions giving rise to receipts from and expenditures abroad, and the extent to which these are out of balance. The capital account presents an analysis of the movements of short-term and long-term capital that have occurred during a comparable period.

Each year since 1950, with the exception of 1952, Canada's current expenditures abroad exceeded external current receipts. The resulting current account deficits that occurred in this period of rapid Canadian development were financed by inflows of capital. Current account deficits have customarily been associated with periods of Canadian prosperity and once again the rate of recent Canadian growth with the development of new resources has been the underlying element in the strength of Canadian demands for imported goods and services. High levels of investment at a time when defence expenditures were also very heavy, together with rising levels of consumption, contributed to the deficits. Before 1955 the deficits in recent years were not large in proportion to the high levels of total current transactions and, until then, capital inflows of a long-term type were large enough to finance the deficits in most periods. But in 1955 the current deficit rose to \$698,000,000, and this deficit was substantially more than the net inflow of long-term capital. In 1956, as the result of continuing high levels of investment and consumption, the deficit rose to the unprecedented peak of \$1,372,000,000. At the same time, inflows of capital in long-term forms more than tripled those of the previous year and were almost sufficient to finance the record deficit.

* Prepared in the Balance of Payments Section, International Trade Division, Dominion Bureau of Statistics. More detailed information is given in the annual and quarterly publications *Canadian Balance of International Payments*, and in *Canada's International Investment Position*.

Current Account Transactions.—The relatively stable current account deficits of some \$400,000,000 in 1953 and 1954, were followed by a widening of such deficits to \$698,000,000 in 1955 and \$1,372,000,000 in 1956. The growth in the deficit over these two years of rapid expansion in the Canadian economy was primarily related to a larger imbalance on merchandise trade. Of the \$940,000,000 rise in the deficit between 1954 and 1956, almost \$750,000,000 was the result of larger net payments for imported commodities, and the remainder reflected growth in the non-merchandise or 'invisible' items. From the end of the War until 1955, there was a relatively consistent pattern of surpluses on adjusted merchandise trade transactions,* and some of these surpluses were substantial. The pattern was broken only in 1951 and 1953, and the 1953 deficit of \$58,000,000 was replaced by a small surplus in 1954, with exports contracting relatively less than imports as economic activity slackened in that year. Towards the end of 1954, however, the slow-down came to an end, and a period of unprecedented growth and development began.

The deficit on merchandise transactions grew to \$211,000,000 in 1955 and \$734,000,000 in 1956, largely as a result of \$2,200,000,000 additional imports. The expansionary forces that were evident throughout the two years permeated almost every area of economic activity but the major area of expansion and development was investment. During 1955 and 1956, public and private domestic investment increased by 13 p.c. and 24 p.c., respectively. This rise included utility and resource development, machinery and equipment for manufacturing and service industries, including government investment expenditures on highways, and services incidental to the growth in house building. In recent years a large part of the equipment and supplies for Canada's investment program has been obtained from the United States. In 1955 and 1956 the record levels of expenditure in this sector resulted in tremendous growth of imports of machinery, equipment and construction materials, and of raw materials for the Canadian capital goods industries. At the same time, high levels of personal income and consumption resulted in larger imports of consumer goods, and materials and supplies for Canadian industry producing consumer goods. Gains in almost every phase of the economy in 1955 and 1956 exerted heavy pressure on Canadian productive capacity, and shortfalls in the face of these demands were met for the most part with imported goods, largely from the United States.

At the same time, economic activity over these two years grew apace in most countries, including such important markets for Canadian production as the United States, the United Kingdom and Western Europe. In the two years Canadian exports increased by about \$400,000,000 and \$900,000,000 respectively; gains in a large number of traditional export categories were accompanied by some extraordinary increases. Exports of grain in 1956 were exceptionally large as a result of shortages in local supplies in Western Europe. In addition, there were marked advances in exports of some raw materials following increased productive capacity.

Export and import prices rose almost 7 and 4 p.c., respectively, during 1955 and 1956 and, as a result, the terms of trade became slightly more favourable.

There was also a significant and persistent advance in the deficit on non-merchandise account although this was smaller than on commodity trade. From \$445,000,000 in 1954 this deficit, from a wide range of transactions in services with other countries, rose to \$487,000,000 in 1955 and to \$638,000,000 in 1956. The over-all expansionary influences of a fast-growing economy were evinced by increased payments abroad in 1955 and 1956 for the whole range of invisible imports; the most notable of these were for travel by Canadians outside of Canada, interest and dividend payments on the growing amount of foreign capital invested in Canada, freight and shipping, and business and other miscellaneous services. Another group of rising expenditures abroad included the cost to the

* The adjustments from commodity trade statistics to merchandise imports and exports for balance of payments purposes include a variety of non-commercial items such as settlers' effects, and bequests and donations in kind, items covered elsewhere in the balance of payments such as tourists' imports and exports, and a variety of special items including defence imports for the account of governments of other countries.

Federal Government of maintaining armed forces in Europe as part of Canada's contribution to the North Atlantic Treaty Organization defence plans, and goods and services financed by Canada's contribution to the Colombo Plan. In addition, there was a marked growth in overseas remittances from Canada, particularly by recent immigrants from Western Europe. By the end of 1956, total immigration to Canada in the postwar years had reached 1,400,000.

At the same time, there were increased receipts of migrants' funds as the result of a large inflow of immigrants to Canada in 1956. Total receipts for non-merchandise transactions also rose over the two years, although not as much as payments. The major increases were for freight and shipping services, particularly earnings of inland freight on new exports of bulk commodities, and for expenditures by the United States on defence establishments in Canada.

An important feature of the growth of Canada's current account deficit in 1955 and 1956 was the growth in the deficit with the United States. The deficit with all countries increased by about \$940,000,000 from 1954 to 1956; the deficit with the United States rose by \$833,000,000. The predominant role played by the United States reflected the growth in imports of investment and consumer goods, and in larger payments by Canadians for non-merchandise items. These included expenditures for travel, substantially larger remittances of interest and dividends arising in part from an increased non-resident participation in Canadian equity capital, and larger net payments for freight and shipping services.

The bilateral account with overseas countries showed a decline in surplus from \$375,000,000 in 1954 to \$268,000,000 in 1956. These totals conceal a variety of divergent movements. In 1955, the surplus with the United Kingdom rose by almost \$100,000,000 to \$330,000,000, largely as a result of increased exports from Canada. By 1956 most of this increase in surplus over 1954 had disappeared as a result of increased merchandise imports, particularly investment goods, a dropping off in exports of lumber to the United Kingdom, and larger net payments for non-merchandise items. The surplus with the remainder of the Sterling Area changed little from 1954 to 1956, although there was a notable rise in exports to Commonwealth countries in 1955, which somewhat increased the surplus in that year.

The surplus with other OEEC (Organization for European Economic Co-operation) countries declined from \$93,000,000 in 1954 to \$12,000,000 in 1956. There were roughly comparable absolute increases in both exports and imports from this group of countries, stimulated by high levels of activity both in Canada and overseas. The decline in the surplus relates to increased net payments for a majority of non-merchandise transactions, including travel expenditure, remittances of investment income, payments for freight and shipping services, other miscellaneous payments for services, and government defence expenditures abroad in connection with Canada's participation in NATO. In addition to the above direct military expenditures, there was Canada's contribution of Mutual Aid to NATO countries, which amounted to some \$222,000,000 in 1955 and \$157,000,000 in 1956, bringing the total contribution from 1950 to over \$1,300,000,000. Being a contribution of military aid in this form, Mutual Aid has not been taken into the current account balance, although the item may be included as a credit for exports and offset by a debit representing the contribution.

The small surplus with other overseas countries in 1954 became a deficit of \$79,000,000 in 1955 and \$36,000,000 in 1956. The major factor in this was the development of deficits on merchandise trade. In 1955 exports declined and imports rose; in 1956 both exports and imports rose but the export gains were relatively larger, and the deficit declined somewhat. At the same time there was a larger surplus on non-merchandise account, primarily as a result of increased income receipts.

Capital Movements.—The forms of capital movements that financed the greatly enlarged current deficits in 1955 and 1956, and the related monetary background, were quite different in the two years. The greatest of these changes was the wide fluctuation in the

net inflow of capital in long-term forms. These inflows declined to \$410,000,000 in 1955, less than 60 p.c. of the current account deficit, whereas in preceding years long-term inflows of capital were more than sufficient to finance current deficits. But again in 1956 long-term types of inflow rose sharply to some \$1,350,000,000 and financed almost all of the record-size deficit. Underlying influences affecting these changes included the greater inducements to borrow in the United States through the sale of new Canadian issues in capital markets there, as monetary pressures tightened towards the end of 1955 and intensified in 1956. Consequently, a great increase occurred in inflows to Canada from new issues of Canadian securities sold abroad along with reduced outflows for the repatriation of outstanding Canadian bonds held in the United States which had been prominent in 1955. But, at the same time, inflows of capital into equities in Canadian industry continued to grow in both years for direct investment in non-resident-controlled firms in Canada and for investment in outstanding Canadian stocks.

As a result of these developments, Canada obtained in 1955 additional physical resources from abroad to carry out an expanding investment program by falling back on an excess of long-term inflows over the postwar years. Short-term inflows of capital therefore played a more important part in financing the deficit in 1955 than in earlier years, or in the following year. A major part of the increase in short-term inflows in 1955 originated in the account with the United States. Of net inflows of \$425,000,000 from that country more than one-half were in short-term forms. The latter inflows included a rise in the holdings of Canadian dollars by non-residents, a reduction in official holdings of gold and foreign exchange, and changes in international commercial receivables and payables. Inflows from the United Kingdom reached a postwar peak at \$199,000,000 and the increase in inflows from that country in the year was largely the result of a drawing down of sterling balances previously acquired by Canadians.

In contrast, inflows of long-term capital in 1956 financed almost all of the current account deficit as the extraordinary rate of growth in the Canadian economy resulted in mounting pressures of demand for capital as well as goods and services. An unprecedented volume of capital investment, coupled with an already generally high level of economic activity, subjected the Canadian economy to special strains in 1956, and these had important effects on international capital movements. It has already been noted that the physical impact of these pressures was felt in the substantial deficits incurred on current account as the Canadian economy supplemented its own output with large net drafts on the goods and services of other countries. Strong pressures were also created on Canada's capital market, and there were sharp increases in interest rates. Higher interest rates were also characteristic of foreign capital markets but the differential between rates in Canada and the United States widened somewhat. This development contributed to a very large volume of financing abroad by provincial governments, municipalities and corporations. These inflows were superimposed on the persistent inflows in recent years for direct investment in foreign-controlled enterprises in Canada and for portfolio investment in Canadian equities, both of which reached new heights in 1956. For the year as a whole, the inflow for direct investment was placed at \$595,000,000. Transactions in Canadian securities led to a further inflow of \$748,000,000, which included \$265,000,000 of equities. These two groups of transactions alone added \$1,343,000,000 to Canadian external liabilities in long-term forms. In addition to other smaller long-term inflows such as foreign security sales and loan repayments, there was a \$110,000,000 outflow for direct investment abroad. This brought the total inflows of a long-term type to \$1,350,000,000, as compared with \$410,000,000 a year earlier.

Canadian direct investment abroad established a record at \$110,000,000. About 70 p.c. of the net movement was to the United States, and involved the acquisition of control over existing enterprises abroad, particularly in merchandising. In addition there was a disposition of Canadian interests in utilities in Latin America.

The United States continued to be the major source of long-term external capital for Canada in 1956. Indeed, the net movements in long-term forms were somewhat more than two-thirds from the United States in 1956 in contrast to just under one-half in 1955 when

there was a significant volume of repatriation of Canadian funded debt from that country. Although overshadowed by the size of the tremendous inflows of more than \$900,000,000 from the United States, which were about four times larger than in 1955, the movements in long-term forms in 1956 from the United Kingdom and from other overseas countries also rose sharply. While overseas countries have not, as a general rule, been an important source of debt capital for Canada for many years past, their demand for Canadian portfolio equities, together with some major direct investments in Canada and the placement of some new Canadian issues in European markets, brought the total inflow in long-term forms to more than \$425,000,000 for the year. This was more than double the figure for 1955 and was far in excess of any year since the commencement of regular official balance of payments statistics in 1926.

Again in contrast to 1955, there was a decline in 1956 in the Canadian dollar holdings of foreigners, and an increase in official holdings of gold and foreign exchange; all other capital movements in 1956 were, on balance, about half the net movement in the previous year. A great variety of transactions, mainly short-term in character, comprise this latter group. Although outflows were substantial they were more than offset by inflows. Among the outflows was a rise in Canadian holdings of short-term assets abroad. Inflows included borrowing by finance companies, other capital transfers by financial institutions and an apparently large rise in net payables on commercial account.

Closely related to the developments described above was the persistent strengthening in the exchange rate for the Canadian dollar during 1956 which contrasts with the weakening that occurred in 1955. The monthly trend in the value of the United States dollar in Canada for some years is presented in Table 3 of Part I of this Chapter.

Comments and statistics on the effects of the unprecedented capital inflows of recent years upon the ownership of investments in Canada will be found in the Section on Canada's International Investment Position in Chapter XXV.

1.—Current Account between Canada and All Countries 1937-56

(Millions of dollars)

Year	Current Receipts ¹	Current Payments ²	Net Balance including Mutual Aid Exports	Wartime Grants and Mutual Aid	Net Balance on Current Account indicating Net Movement of Capital
1937.....	1,593	1,413	+180	—	+180
1938.....	1,361	1,261	+100	—	+100
1939.....	1,457	1,331	+126	—	+126
1940.....	1,776	1,627	+149	—	+149
1941.....	2,458	1,967	+491	—	+491
1942.....	3,376	2,275	+1,101	-1,002	+99
1943.....	4,064	2,858	+1,206	-518	+688
1944.....	4,557	3,539	+1,018	-960	+58
1945.....	4,456	2,910	+1,546	-858	+688
1946.....	3,365	2,905	+460	-97	+363
1947.....	3,748	3,699	+49	—	+49
1948.....	4,147	3,696	+451	—	+451
1949.....	4,089	3,912	+177	—	+177
1950.....	4,297	4,574	-277	-57	-334
1951.....	5,311	5,683	-372	-145	-517
1952.....	5,858	5,494	+364	-200	+164
1953.....	5,737	5,934	-197	-246	-443
1954.....	5,520	5,668	-148	-284	-432
1955 ^a	6,072	6,548	-476	-222	-698
1956 ^a	6,594	7,809	-1,215	-157	-1,372

¹ Includes Mutual Aid exports.

² Excludes Mutual Aid offsets.

2.—Geographical Distribution of the Balance on Current Account between Canada and Other Countries 1937-56

NOTE.—In the years 1942-46 balances include exports of currently produced goods provided as Mutual Aid or Official Contributions. (See also Table 1.)

(Millions of Canadian dollars)

Year	United States ¹	United Kingdom ²	Other Overseas Countries ³	All Countries	Year	United States ¹	United Kingdom ²	Other Overseas Countries ³	All Countries
1937.....	-77	+135	+122	+180	1947....	-1,134	+633	+550	+49
1938.....	-149	+127	+122	+100	1948....	-393	+486	+358	+451
1939.....	-116	+137	+105	+126	1949....	-601	+446	+332	+177
1940.....	-292	+343	+98	+149	1950....	-400	+24	+42	-334
1941.....	-318	+734	+75	+491	1951....	-951	+223	+211	-517
1942.....	-180	+1,223	+58	+1,101	1952....	-819	+388	+625	+164
1943.....	-19	+1,149	+76	+1,206	1953....	-904	+133	+328	-443
1944.....	+31	+746	+241	+1,018	1954....	-807	+229	+146	-432
1945.....	+36	+747	+763	+1,546	1955 ^a ...	-1,035	+330	+7	-698
1946.....	-607	+500	+567	+460	1956 ^a ...	-1,640	+254	+14	-1,372

¹ Includes all net exports of non-monetary gold.

² Excludes wheat exports diverted to other overseas countries and exports of gold.

³ Includes estimated value of wheat sold in European countries.

3.—Balance of International Payments between Canada and All Countries 1951-56

(Millions of dollars)

Item	1951	1952	1953	1954	1955	1956 ^a
A. CURRENT RECEIPTS—						
Merchandise exports (adjusted).....	3,950	4,339	4,152	3,929	4,332	4,833
Mutual Aid to NATO countries.....	145	200	246	284	222	157
Gold production available for export.....	150	150	144	155	155	150
Tourist and travel expenditure.....	274	275	302	305	328	336
Interest and dividends.....	115	145	165	147	160	140
Freight and shipping.....	351	383	318	313	398	450
All other current credits.....	326	366	410	387	477	528
TOTALS, CURRENT RECEIPTS.....	5,311	5,858	5,737	5,520	6,072	6,594
B. CURRENT PAYMENTS—						
Merchandise imports (adjusted).....	4,097	3,850	4,210	3,916	4,543	5,567
Tourist and travel expenditure.....	280	341	365	389	449	498
Interest and dividends.....	450	413	404	423	483	530
Freight and shipping.....	354	375	374	356	415	498
Official contributions ¹	154	216	271	295	246	187
All other current debits.....	493	499	556	573	634	686
TOTALS, CURRENT PAYMENTS.....	5,828	5,694	6,180	5,952	6,770	7,966
C. CURRENT ACCOUNT BALANCE.....	-517	+164	-443	-432	-698	-1,372
D. CAPITAL ACCOUNT—						
Direct Investment—						
Direct investment in Canada.....	+309	+346	+426	+392	+417	+595
Direct investment abroad.....	-20	-77	-63	-81	-74	-110
Canadian Securities—						
Trade in outstanding issues.....	+38	-94	-31	+63	-27	+207
New issues.....	+411	+316	+335	+331	+166	+681
Retirements.....	-184	-89	-146	-203	-184	-140
Foreign security transactions.....	+15	-8	-	-24	-6	+12
Repayments on Government of Canada war and postwar loans.....	+68	+56	+87	+72	+69	+69
Change in Canadian dollar holdings of foreigners.....	-192	-66	-18	+34	+89	-26
Change in official holdings of gold and foreign exchange (increase, minus).....	-56	-37	+38	-124	+44	-33
Other capital movements ²	+128	-511	-185	-28	+204	+117
E. NET CAPITAL MOVEMENT.....	+517	-164	+443	+432	+698	+1,372

¹ Includes Mutual Aid to NATO countries. omissions.

² Includes unrecorded capital movements, and errors and

4.—Current and Capital Account Transactions between Canada and the United States 1951-56

(Millions of dollars)

Item	1951	1952	1953	1954	1955	1956 ^P
A. CURRENT RECEIPTS—						
Merchandise exports (adjusted).....	2,326	2,346	2,458	2,355	2,598	2,850
Net exports of non-monetary gold.....	150	150	144	155	155	150
Travel expenditure.....	258	257	282	283	303	308
Interest and dividends.....	57	85	101	69	78	75
Freight and shipping.....	164	174	164	169	203	220
All other current receipts.....	223	262	294	275	363	395
TOTALS, CURRENT RECEIPTS.....	3,178	3,274	3,443	3,306	3,700	3,998
B. CURRENT PAYMENTS—						
Merchandise imports (adjusted).....	2,842	2,817	3,046	2,800	3,283	4,023
Travel expenditure.....	246	294	307	320	363	391
Interest and dividends.....	382	344	334	345	388	433
Freight and shipping.....	276	302	296	261	287	350
All other current payments.....	383	366	364	387	414	441
TOTALS, CURRENT PAYMENTS.....	4,129	4,123	4,347	4,113	4,735	5,638
C. CURRENT ACCOUNT BALANCE.....	-951	-849	-904	-807	-1,035	-1,640
D. CAPITAL ACCOUNT—						
Direct Investment—						
Direct investment in Canada.....	+270	+319	+346	+288	+306	+409
Direct investment abroad.....	-4	-42	-33	-46	-56	-77
Canadian Securities—						
Trade in outstanding issues.....	+20	-104	-80	—	-67	+41
New issues.....	+404	+315	+322	+299	+127	+616
Retirements.....	-159	-75	-132	-184	-169	-133
Foreign security transactions.....	+17	+4	+3	+4	+25	+11
Change in Canadian dollar holdings of foreigners.....	-53	-37	-1	+19	+66	-49
Change in official holdings of gold and foreign exchange (increase, minus).....	-39	-80	+42	-121	+42	-34
Other capital movements ¹	+59	-458	-223	+18	+151	+152
E. NET CAPITAL MOVEMENT.....	+515	-158	+244	+277	+425	+936
F. BALANCE SETTLED BY EXCHANGE TRANSFERS.....	+436	+1,007	+660	+530	+610	+704
TOTALS, FINANCING OF CURRENT ACCOUNT BALANCE.....	+951	+849	+904	+807	+1,035	+1,640

¹ Includes unrecorded capital movements, and errors and omissions.

5.—Current Account Transactions between Canada and the United Kingdom 1951-56

(Millions of dollars)

Item	1951	1952	1953	1954	1955	1956 ^P
A. CURRENT RECEIPTS—						
Merchandise exports (adjusted).....	636	727	656	660	772	818
Travel expenditure.....	8	10	12	13	13	14
Interest and dividends.....	30	29	28	35	41	20
Freight and shipping.....	91	105	79	73	97	98
All other current receipts.....	56	54	55	55	59	64
TOTALS, CURRENT RECEIPTS.....	821	925	830	836	982	1,014
B. CURRENT PAYMENTS—						
Merchandise imports (adjusted).....	417	350	463	391	406	493
Travel expenditure.....	20	27	31	35	40	46
Interest and dividends.....	57	56	57	62	75	72
Freight and shipping.....	43	42	42	39	49	58
All other current payments.....	61	62	104	80	82	91
TOTALS, CURRENT PAYMENTS.....	598	537	697	607	652	760
C. CURRENT ACCOUNT BALANCE.....	+223	+388	+133	+229	+330	+254

Section 2.—Travel between Canada and Other Countries

A new record was set in volume of travel between Canada and other countries in 1956. Visits to Canada by residents of other countries numbered 27,700,000 while Canadians reciprocated with 27,200,000 visits to other countries. The volume of all travel amounted to 54,900,000 visits as compared with 53,200,000 visits in 1955, an increase of approximately 3 p.c.; the 1955 increase over 1954 was nearly 7 p.c.

While the increase in the number of Canadians travelling to other countries in 1956 was about 2,400,000 or 9 p.c. as compared with 1955, which in turn was 1,500,000 over 1954, the entries into Canada by residents of other countries declined by 614,300 or nearly 2 p.c. This included approximately 616,900 fewer visits from the United States but 2,600 additional entries direct from overseas countries. The 1955 figure was an increase of nearly 2,000,000 over 1954.

Regardless of the fewer number of visitors coming to Canada in 1956, visitor expenditures in this country reached an all-time high of \$337,000,000, \$9,000,000 above the expenditure figure for 1955 or an increase of nearly 3 p.c. The 1955 total was an increase of about \$23,000,000 over 1954. At the same time, Canadians spent nearly \$500,000,000 travelling in other countries during 1956, \$49,000,000 or 11 p.c. more than in 1955. Thus the debit balance on travel account which had been \$121,000,000 in 1955 was extended by \$40,000,000 to \$161,000,000 in 1956, almost double the 1954 figure.

Travel by Residents of the United States in Canada.—Receipts from residents of the United States advanced to a record of \$309,000,000 in 1956, 2 p.c. higher than in 1955 even though 2 p.c. fewer visits were recorded. The increase was accounted for by the tourists travelling by automobile who spent \$172,000,000 in Canada as compared with \$165,000,000 in 1955. There were 8,400,000 non-resident automobiles in Canada during 1956, about 241,000 more than in 1955. However, this increase was more than accounted for by a 5-p.c. increase in the non-permit or local class of vehicles entering—the number of foreign vehicles entering on travellers' vehicle permits was between 1 and 2 p.c. lower than in 1955, but these expenditures were slightly higher. Average expenditure per visit in 1956 was higher in most of the provinces and the aggregate for all provinces was up between 3 and 4 p.c. Receipts from the non-permit or local classification of automobile traffic were also substantially higher in 1956. Receipts from visitors arriving by other forms of transportation were practically unchanged from the previous year, although there was a substantial decrease in their numbers.

Motorists entering Canada on travellers' vehicle permits contributed about 44 p.c. of the total travel receipts from residents of the United States during 1956. Although no direct record of their movement within Canada is maintained, a study of the ports of entry and exit give some indication of the routes within Canada that attract the greatest number of American motorists. This information represents minimum interprovincial or interregional travel and does not include cars entering or leaving by the same province or region after visiting other provinces or other areas within the province of entry. During 1956, 5,376 cars entered Canada through ports in the Maritime Provinces and returned to the United States through ports in the Province of Quebec, whereas 8,611 vehicles entered Canada through ports in Quebec and returned to the United States through ports in the Maritime Provinces. From 75 to 77 p.c. of these visitors remained in Canada for three or more days. The most popular route for travel in each direction lies between the ports of St. Stephen, N.B., and Blackpool, Que.

The interchange of entries and exits between Ontario and Quebec accounts for a substantial segment of the number of Americans travelling in these Provinces. During 1956, some 33,380 foreign vehicles entered Canada on customs permits through ports in Quebec and returned to the United States through Ontario ports. This represented about 8 p.c. of all the vehicles entering Canada through Quebec ports. Approximately 82 p.c. of these motorists stayed in Canada for three or more days. Travel in the opposite direction

was somewhat heavier as 50,939 vehicles entered through Ontario ports and returned through Quebec ports. Automobiles returning through Quebec represented between 3 to 4 p.c. of all entries into Ontario on travellers' vehicle permits and 85 p.c. of the vehicles travelling in that direction remained in Canada for three or more days. The volume of traffic between Quebec and Ontario is heavier on routes between Blackpool and Niagara Falls than between any other combination of ports.

Within Ontario, which normally accounts for about 60 p.c. of the entries into Canada on travellers' vehicle permits, there are several routes that appear to be popular with foreign motorists. The highways between Fort Erie and Niagara Falls on the east of southern Ontario and the St. Clair and Detroit River ports on the west carry the heaviest volume of traffic. During 1956, 189,200 vehicles travelled from east to west between these ports and 200,900 from west to east. The fact that well over half of these vehicles were in the country only one day shows the extent of in-transit traffic over this route. The trip across southern Ontario is about 250 miles long, and is more than 100 miles shorter than the route south of Lake Erie. Because Ontario has such a high proportion of in-transit travel, average expenditure per visit is lower than in the other provinces.

The route between Fort Erie-Niagara Falls and the St. Lawrence River ports is a better source of travel receipts since it often involves a trip north of Lake Ontario and perhaps a visit to Toronto or some of the tourist resorts in central Ontario. In 1956, 37,800 automobiles used this route either way, and two-thirds of them were in Canada three or more days.

Travel across the northern areas of Ontario has not developed to any extent because of the distance involved and the condition of many parts of the highways. However, 827 vehicles entered Ontario somewhere east of Port Arthur and returned to the United States through Pigeon River, Fort Frances or Rainy River after staying in Canada for three days or longer. The number of cars travelling in the opposite direction was 1,082.

In 1956 some 5,126 cars entered Canada through ports in Ontario west of Port Arthur and returned to the United States through ports in Manitoba, nearly 75 p.c. of them staying three or more days. Travel in the opposite direction totalled 4,919 but 80 p.c. of the permits covered visits of three or more days.

Almost 36 p.c. of the longer-term group of foreign automobiles entering through ports in Alberta returned to the United States through British Columbia. The ports of Carway, Alta., and Kingsgate, B.C., appear more frequently than any other combination of ports in the exchange of travel between the two provinces, and the number of cars travelling in both directions was 20,765.

Residents of the United States visiting Alaska usually enter through Alberta or British Columbia and continue in-transit through Yukon Territory to their destination. The journey involves more than 2,000 miles of travel through Canada and therefore requires a length of stay in this country. This in-transit travel to Alaska no doubt contributes to the high averages of tourist expenditures in Alberta and British Columbia.

During 1956, about 8,500 cars entered Canada through ports in Alberta or British Columbia and left mainly through the port of Snag Creek in Yukon Territory. About 38 p.c. of them entered at Coutts in Alberta, and 28 p.c. entered through Huntingdon or Aldergrove in British Columbia. The return trip usually followed the same route.

Canadian Travel in the United States.—Travel to the United States by residents of Canada reached a new high in 1956 when there were 2,300,000 more crossings than in 1955. Total re-entries of Canadians returning from visits to the United States amounted to 27,100,000. Short-term traffic increased by 10 p.c., while an increase of between 5 and 6 p.c. was shown in the long-term visits. The movement of visitors from Canada to the United States was almost equal to the corresponding movement from the United States to Canada. There were, for example, some 4,276,900 Canadians in the longer-term group of re-entries as compared with 4,407,400 visits of the same duration from residents of the United States.

A record amount was spent on travel in the United States by residents of Canada during 1956; the total of \$391,000,000 represents an additional \$28,000,000 as compared with the previous record spent in 1955. Most of the additional expenditure appeared in the long-term traffic where the increase amounted to \$24,000,000; short-term travellers spent an extra \$4,000,000 during 1956. The average expenditure was \$78.79 per long-term visit, a 2-p.c. increase over 1955, and \$2.37 per short-term visit, a 2-p.c. decrease over 1955. The average expenditure for all visits was \$14.44. On a per capita basis, residents of Canada spent \$24.32 for travel in the United States in 1956. This is a higher figure than the average per visit because, besides the effect of commuters, many Canadians make several trips to the United States in a year. The Canadian averages are all much higher than corresponding rates for United States visitors. Per capita expenditures of Americans on travel in Canada averaged about \$1.85 in 1956, while the average expenditure per visit to Canada was \$11.18.

Canadian expenditures in the United States included purchases of merchandise. Declarations made under the \$100 customs exemption privilege during 1956 totalled close to \$73,000,000, an increase of \$3,600,000 over the previous year and nearly 19 p.c. of the total amount spent by Canadians while travelling in the United States. This latter percentage was about the same as in 1955.

A special study on characteristics of Canadian travel to the United States shows that, in 1956, 38 p.c. of the respondents reported recreation as the purpose of visit, 30 p.c. went to visit friends or relatives, 19 p.c. went to shop and 10 p.c. went on business or for educational purposes. Information on the destination of longer-term visitors to the United States showed that the State of destination varies with the season of the year. During the first three months of 1956, nearly 24 p.c. of the Canadian visitors covered in the sample went to Florida. The proportion dropped to 10 p.c. in the second quarter, 4 p.c. in the third and 5 p.c. in the fourth. Altogether for the year, between 9 and 10 p.c. gave Florida as their destination, a figure which changed little from 1955. New York drew over 28 p.c., which was the greatest number of Canadian visitors to any State during the year; during the second and fourth quarters the percentage was somewhat higher, which suggests a seasonal pattern influenced by holiday periods. The State of Washington was the destination of 11 p.c., Michigan 9 p.c. and California 5 p.c. Visitors to California preferred the first quarter of the year when the proportion was nearly 8.5 p.c.

It was also found that the States immediately south of the border attract the greater percentages of re-entries to bordering provinces. Thus, from the Atlantic Provinces over 38 p.c. of the Canadian visitors reported visits to Massachusetts, 28 p.c. to Maine and 15 p.c. to the State of New York. More than 39 p.c. of the residents of Canada returning through Quebec and Ontario visited New York State without going farther south. Many re-entries through Quebec also visited Massachusetts, Vermont and Florida. Michigan attracted over 17 p.c. of the Ontario visitors and Florida nearly 14 p.c. Almost 64 p.c. of the visitors returning to Manitoba and 48 p.c. returning to Saskatchewan had been to Minnesota and North Dakota. Of the re-entrants to Alberta, 41 p.c. had not travelled beyond Montana, 11 p.c. remained in the State of Washington and 9 p.c. visited California. Canadians who re-entered British Columbia stayed very close to the Pacific Coast; over 59 p.c. had been in Washington and 33 p.c. had visited California, Oregon and Idaho.

Travel between Canada and Overseas Countries.—Travel between Canada and overseas countries continued to show considerable expansion during 1956, particularly in the number of visits to overseas countries by residents of Canada. The expenditures of Canadians in overseas countries rose more rapidly than the receipts of visitors from overseas, resulting in a record deficit of \$79,000,000, which was about half of Canada's travel deficit for the year.

Residents of Canada returning direct from overseas countries *via* Canadian ports numbered 106,100, about 18,100 more than in the previous year. These direct re-entries were supplemented by an estimated 33,000 who travelled *via* the United States, making a

total of 139,100, which was an increase of 22,100 over 1955. More than 53 p.c. of the direct travel by air is covered by the ports of Gander, Nfld., Dorval, Que., Malton, Ont., and Vancouver, B.C., and there were 14,800 more re-entries through these ports in 1956 than in 1955. Re-entries by ship came mainly through St. John's, Nfld., Halifax, N.S., Saint John, N.B., Quebec and Montreal, Que., and Vancouver, B.C. The number of re-entries at these ports numbered 3,300.

The expenditures of Canadians in overseas countries reached a record of \$107,000,000 in 1956, \$21,000,000 higher than in 1955. The United Kingdom receives the major portion of overseas expenditure, although other European countries are gradually claiming more of the Canadian travel dollar. The United Kingdom received about \$46,000,000 in 1956 as compared with \$40,000,000 in 1955, and other European countries \$41,000,000 as against \$32,000,000. Higher averages per visit were reported by persons visiting other European countries than by those visiting the United Kingdom, and persons visiting both the United Kingdom and the Continent reported that more than 50 p.c. of their expenditures were made in Continental Europe. Thus there was little difference in the expenditures in the two areas, although substantially more visits to the United Kingdom were reported,

Data on destinations of Canadians returning directly show that, in 1956, 36 p.c. visited the United Kingdom only, 33 p.c. visited the United Kingdom and other European countries, about 12 p.c. visited European countries other than the United Kingdom only, 4 p.c. visited Bermuda, 4 p.c. went to the British West Indies, 5 p.c. to Mexico, nearly 3 p.c. to Hawaii, 2 p.c. to countries not specified, and less than 1 p.c. to other countries.

Length of stay abroad varied according to destination. The average stay in the United Kingdom was close to 63 days; persons travelling by vessel stayed about 80 days and those travelling by air averaged about 41 days. Persons visiting the United Kingdom and other European countries averaged approximately 71 days, 38 days in the United Kingdom and 33 days on the Continent. Here again persons travelling by ship averaged approximately 93 days, and those travelling by air about 48 days. Visits of longer duration were reported by persons visiting only European countries other than the United Kingdom. The average length of visit by ship passenger to Continental Europe only was 91 days, and by air travellers about 47 days. The average length of stay in Bermuda was 16 days, and in the British West Indies around 24 days. Much longer visits were reported by Canadians who visited other parts of the Commonwealth. For other countries visited the average length of stay was: Mexico, 20 days; Central America, 26 days; Hawaii, 28 days; and South America, 47 days.

Non-resident travellers (other than immigrants) arriving direct from overseas countries through Canadian ports of entry in 1956 numbered about 30,600, about 2,600 more than in 1955. In addition, an estimated 22,000 visitors from overseas entered Canada by the United States. The total was thus 52,600, or 4,600 more than in the previous year.

Expenditures in Canada by overseas visitors were estimated at \$28,000,000 in 1956, a record amount \$3,000,000 above the 1955 total. Included were transportation costs paid to Canadian carriers which accounted for about 50 p.c. of the total receipts from residents of overseas countries. Expenditures of overseas travellers in Canada are higher than the volume indicates because of higher transportation costs and usually longer visits.

Tourist Information.—Tourist information generally is supplied by the Canadian Government Travel Bureau, Ottawa, and detailed information on the National Parks and Historic Sites is available from the Department of Northern Affairs and National Resources, Ottawa. For advice regarding specific provinces or particular cities or resorts, application should be made to the Provincial or Municipal Bureau of Information concerned.

6.—Number and Expenditure of Foreign Travellers in Canada and Canadian Travellers Abroad 1955 and 1956

Year and Class of Traveller	Foreign Travellers in Canada ¹	Foreign Expenditure in Canada	Canadians Travelling Abroad ¹	Canadian Expenditure Abroad	Excess of Foreign Travellers in Canada ¹	Excess of Canadian Expenditure Abroad
	No.	\$'000	No.	\$'000	No.	\$'000
1955						
Travellers from and to overseas countries.....	28,000	25,000	88,000	86,000	-60,000	+61,000
Travellers from and to the United States—						
Automobile—						
Short-term visit ²	17,825,800	46,900	15,367,400	35,600	+2,458,400	-11,300
Long-term visit.....	3,006,200	118,500	2,746,700	142,600	+259,500	+24,100
Rail.....	939,800	41,500	481,100	66,300	+458,700	+24,800
Boat.....	369,600	13,000	110,300	5,100	+259,300	-7,900
Bus (exclusive of local bus).....	340,000	22,300	465,400	46,100	-125,400	+23,800
Aircraft.....	288,500	37,300	253,900	52,700	+34,600	+15,400
Other (pedestrians, local bus, etc.)	5,513,500	23,400	5,329,000	14,400	+184,500	-9,000
Totals, United States.....	28,283,400	302,900	24,753,800	362,800	+3,529,600	+59,900
Totals, All Countries.....	28,311,400	327,900	24,841,800	448,800	+3,469,600	+120,900
1956						
Travellers from and to overseas countries.....	30,600	28,000	106,100	107,000	-75,500	+79,000
Travellers from and to the United States—						
Automobile—						
Short-term visit ²	19,377,200	54,900	17,204,300	38,000	+2,172,900	-16,900
Long-term visit.....	3,012,600	117,700	2,958,600	159,400	+54,000	+41,700
Rail.....	882,100	43,700	485,800	64,300	+396,300	+20,600
Boat.....	399,500	15,700	102,100	5,000	+297,400	-10,700
Bus (exclusive of local bus).....	338,900	22,100	435,600	41,900	-96,700	+19,800
Aircraft.....	314,700	36,600	300,300	66,400	+14,400	+29,800
Other (pedestrians, local bus, etc.)	3,341,500	18,700	5,590,000	16,100	-2,248,500	-2,600
Totals, United States.....	27,666,500	309,400	27,076,700	391,100	+589,800	+81,700
Totals, All Countries.....	27,697,100	337,400	27,182,800	498,100	+514,300	+160,700

¹ As these figures are the number of entries and re-entries into Canada, they include substantial amounts of in-transit, commuting and local traffic.

² Visits of fewer than 48 hours.

7.—Summary of Highway Traffic at Canadian Border Points by Province 1955 and 1956

Province or Territory	FOREIGN VEHICLES INWARD					
	Non-permit Class Local Traffic		Travellers' Vehicle Permits		Commercial Vehicles	
	1955	1956	1955	1956	1955	1956
	No.	No.	No.	No.	No.	No.
Atlantic Provinces.....	1,169,151	1,385,993	166,664	174,698	94,989	110,295
Quebec.....	482,534	542,454	405,784	417,826	86,979	120,184
Ontario.....	3,758,160	3,915,963	1,549,942	1,485,360	133,779	156,942
Manitoba.....	72,591	70,890	46,723	45,543	12,717	15,008
Saskatchewan.....	31,956	32,420	18,910	20,984	6,541	8,502
Alberta.....	39,788	32,069	45,745	47,916	7,989	8,773
British Columbia.....	128,583	130,282	283,469	282,926	22,234	29,834
Yukon Territory.....	626	995	7,756	9,191	315	1,385
Totals.....	5,683,389	6,111,066	2,524,993	2,484,444	365,543	450,923
Percentage change 1955-56.....	+7.5		-1.6		+23.4	

**7.—Summary of Highway Traffic at Canadian Border Points by Province 1955 and 1956—
concluded**

Province or Territory	CANADIAN VEHICLES RETURNING					
	After Stay of 24 Hours or Less		After Stay of Over 24 Hours		Commercial Vehicles	
	1955	1956	1955	1956	1955	1956
	No.	No.	No.	No.	No.	No.
Atlantic Provinces.....	1,367,434	1,615,748	97,943	127,366	124,443	137,853
Quebec.....	952,817	1,086,593	310,199	373,757	135,755	183,390
Ontario.....	2,367,938	2,759,531	480,086	478,872	223,384	232,944
Manitoba.....	144,013	136,752	67,869	65,979	25,081	28,125
Saskatchewan.....	65,055	75,043	32,040	31,486	10,217	12,156
Alberta.....	58,247	64,567	65,534	65,050	12,272	13,138
British Columbia.....	534,473	569,786	186,150	203,723	31,653	31,297
Yukon Territory.....	1,069	1,495	381	387	289	355
Totals.....	5,491,046	6,309,515	1,240,202	1,346,620	563,094	639,258
Percentage change 1955-56.....	+14.9		+8.6		+13.5	

PART IV.—THE GOVERNMENT AND FOREIGN TRADE

Section 1.—Foreign Trade Service and Associated Agencies concerned with the Development of Foreign Trade*

Foreign trade contributes substantially to the welfare and prosperity of Canadians, largely because the productive capacity of Canada is greater than the ability of its population to consume the output of farms, factories, forests, fisheries and mines. Every effort is made, therefore, to establish and maintain close commercial relations with other countries whose markets are essential to the Canadian economy. It is appreciated, however, that two-way trade should be encouraged in order that goods and services may be accepted in partial payment for the products Canada is in a position to export. Furthermore, many commodities that are not indigenous to this country must be imported. Some of these are required for industrial processes and others may be classed as consumer goods necessary for the maintenance of the Canadian standard of living.

Although many private firms have established connections in other countries that enable them to maintain a steady flow of goods in either direction, others require the assistance of government agencies in finding markets or sources of supply. Import and export controls imposed by many countries for a variety of reasons, together with postwar foreign exchange difficulties, present problems that no single firm or even an association of manufacturers, exporters or importers can solve without assistance from government representatives.

The Department of Trade and Commerce and associated agencies are at the disposal of exporters and importers engaged directly in the development of Canada's commercial relations with other countries. Services obtainable from the various branches, divisions and agencies are described below.

Canadian Trade Commissioner Service.—The Canadian Trade Commissioner Service is one of the important instruments in the continuous effort to increase Canadian international trade, to give world-wide distribution to Canadian products and to locate the best sources of supply for imports. Headquarters are at Ottawa, and 58 offices are maintained in 45 countries, staffed with trained Canadian trade officials and commodity specialists. The work of the Trade Commissioners in the field is co-ordinated in Ottawa by five Area Trade Officers. These Officers are familiar with every aspect of foreign trade

* Prepared in the several Branches and Divisions concerned and collated in the Trade Publicity Branch, Department of Trade and Commerce, Ottawa.

in their geographical or political areas and are responsible to the Director of the Service for the collection, preparation and presentation of information on all trade matters in their respective territories.

Trade Commissioners bring together exporters and importers of Canada and other countries. They study potential markets for specific Canadian products and report on the exact kind of goods in demand, prices, competitive conditions, trade and exchange regulations, tariffs, shipping and packaging requirements, labelling, etc. Inquiries for Canadian goods are forwarded to the Department at Ottawa or directly to interested Canadian firms. For Canadian importers, Trade Commissioners seek sources of supply of a wide variety of goods. The preparation of economic and other reports for departmental use is an important activity for the Trade Commissioner. Assistance is given to Canadian exhibitors at overseas trade fairs and constant liaison is maintained with the trade departments of foreign governments.

In countries where Canada maintains a diplomatic mission and a trade office, Trade Commissioners form an integral part of the mission and assume the title of Commercial Counsellor or Commercial Secretary. In some foreign countries they act as Consuls General, Consuls or Vice-Consuls, according to their status as Foreign Service Officers.

In order to provide Canadian manufacturers, exporters and importers with up-to-date information concerning their territories more effectively than is possible by correspondence, tours of Canadian industrial centres are arranged from time to time for Trade Commissioners. Such direct contacts enable specific problems to be discussed and at the same time serve to bring into focus for the Trade Commissioner the Canadian industrial picture as a whole.

CANADIAN FOREIGN TRADE OFFICES ABROAD AS AT JAN. 1, 1958

ARGENTINA.—Commercial Counsellor, Canadian Embassy, Bartolome Mitre 478, Buenos Aires.

AUSTRALIA.—Commercial Counsellor for Canada, 7th Floor, Berger House, 82 Elizabeth Street, Sydney, N.S.W.

Commercial Counsellor for Canada, 83 William Street, Melbourne.

AUSTRIA.—Commercial Secretary for Canada, Opernringhof, Opernring 1, Vienna 1. Territory includes Czechoslovakia and Hungary.

BELGIAN CONGO.—Canadian Government Trade Commissioner, Forescom Bldg., Leopoldville 1. Territory includes Angola and French Equatorial Africa.

BELGIUM.—Commercial Counsellor, Canadian Embassy, 35 rue de la Science, Brussels. Territory includes Luxembourg.

BRAZIL.—Commercial Secretary, Canadian Embassy, Edificio Metropole, Av. Presidente Wilson 165, Rio de Janeiro.
Consul and Trade Commissioner, Canadian Consulate, Edificio Alois, Rua 7 de Abril 252, São Paulo.

CEYLON.—Commercial Secretary, Office of the High Commissioner for Canada, 6 Gregory's Road, Cinnamon Gardens, Colombo.

CHILE.—Commercial Secretary, Canadian Embassy, 6th Floor, Av. General Bulnes, 129, Santiago.

COLOMBIA.—Commercial Secretary, Canadian Embassy, Avenida Jimenez No. 7-25, Office 613, Bogota. Territory includes Ecuador.

CUBA.—Commercial Secretary, Canadian Embassy, Edificio Ambar Motors, Avenida Menocal 16, Havana.

DENMARK.—Commercial Counsellor, Canadian Embassy, 4 Trondhjems Plads, Copenhagen. Territory includes Greenland and Poland.

DOMINICAN REPUBLIC.—Commercial Counsellor, Canadian Embassy, Edificio Copello 408, Calle El Conde, Ciudad Trujillo. Territory includes Puerto Rico.

- EGYPT.—Commercial Secretary, Canadian Embassy, 6 Sharia Rouston Pasha, Garden City, Cairo. Territory includes Aden, Sudan, Cyprus, Ethiopia, Saudi Arabia, and Yemen.
- FRANCE.—Commercial Counsellor for Canada, 3 rue Scribe, Paris. Territory includes Algeria, French West Africa, Morocco, Tangier and Tunisia.
- GERMANY, FEDERAL REPUBLIC OF.—Commercial Counsellor, Canadian Embassy, 22 Zitelmannstrasse, Bonn.
Consul, Canadian Consulate, 69 Ferdinandstrasse, Hamburg.
- GHANA.—Commercial Counsellor, Office of the High Commissioner for Canada, Post Office Box No. 1639, Accra. Territory includes Gambia, Nigeria and Sierra Leone.
- GREECE.—Commercial Secretary, Canadian Embassy, 31 Vassilissis Ave., Athens. Territory includes Israel and Turkey.
- GUATEMALA.—Canadian Government Trade Commissioner, 5a Avenida Sud, 10-68, Guatemala City. Territory includes Costa Rica, El Salvador, Honduras, Nicaragua, Panama and Canal Zone.
- *HAITI.—Chargé d'Affaires *ad interim* and Consul, Canadian Embassy, Route du Canape Vert, St. Louis de Turgeau, Port au Prince.
- HONG KONG.—Canadian Government Trade Commissioner, Hong Kong and Shanghai Banking Corporation Bldg., Hong Kong. Territory includes Taiwan, Cambodia, Laos, Vietnam, Macao and China.
- INDIA.—Commercial Counsellor, Office of the High Commissioner for Canada, 4 Aurangzeb Road, New Delhi.
Canadian Government Trade Commissioner, Gresham Assurance House, Mint Road, Bombay. Territory includes Goa.
- INDONESIA.—Commercial Secretary, Canadian Embassy, Djl. Budi Kemuliaan No. 6, Djakarta.
- IRELAND.—Commercial Secretary for Canada, 66 Upper O'Connell St., Dublin.
- ITALY.—Commercial Counsellor, Canadian Embassy, Via G. B. de Rossi 27, Rome. Territory includes Libya, Malta and Yugoslavia.
- JAMAICA.—Canadian Government Trade Commissioner, Barclays Bank Building, King Street, Kingston. Territory includes Bahamas and British Honduras.
- JAPAN.—Commercial Counsellor, Canadian Embassy, Tokyo. Territory includes South Korea.
- LEBANON.—Commercial Secretary, Canadian Legation, Alpha Building, Rue Clemenceau, Beirut. Territory includes Iraq, Jordan, Persian Gulf Area, and Syria.
- MEXICO.—Commercial Counsellor, Canadian Embassy, Melchior Ocampo 463, 7th Floor, Mexico 1, D.F.
- NETHERLANDS.—Commercial Counsellor, Canadian Embassy, Sophialaan 5-7, The Hague.
- NEW ZEALAND.—Commercial Counsellor, Office of the High Commissioner for Canada, Government Life Insurance Bldg., Wellington. Territory includes Fiji and Western Samoa.
- NORWAY.—Commercial Counsellor, Canadian Embassy, Fridtjof Nansens Plass 5, Oslo. Territory includes Iceland.
- PAKISTAN.—Commercial Secretary, Office of the High Commissioner for Canada, Hotel Metropole, Victoria Road, Karachi. Territory includes Afghanistan and Iran.
- PERU.—Commercial Secretary, Canadian Embassy, Edificio Boza, Carabaya 831, Plaza San Martin, Lima. Territory includes Bolivia.
- PHILIPPINES.—Consul General and Trade Commissioner, Canadian Consulate General, Ayala Bldg., Juan Luna Street, Manila.
- PORTUGAL.—Commercial Counsellor, Canadian Embassy, Rua Marques de Fronteira, No. 8-4°D°, Lisbon. Territory includes Azores, Cape Verde Islands, Madeira, and Portuguese Guinea.

* No Foreign Trade Officer at this post.

RHODESIA AND NYASALAND, FEDERATION OF.—Canadian Government Trade Commissioner, Offices 110-113 Central Africa House, Corner First St./Gordon Ave., Salisbury. Territory includes Kenya, Seychelles Islands, Tanganyika, Uganda and Zanzibar.

SINGAPORE.—Canadian Government Trade Commissioner, Room E-3, Union Bldg., Singapore. Territory includes Brunei, Burma, Federation of Malaya, North Borneo, Sarawak and Thailand.

SOUTH AFRICA.—Canadian Government Trade Commissioner, Mutual Bldg., Harrison Street, Johannesburg. Territory includes (Natal, Transvaal, Orange Free State), Madagascar, Mauritius, Mozambique, and Reunion.

Canadian Government Trade Commissioner, 602 Norwich House, The Foreshore, Cape Town. Territory includes (Cape Province), St. Helena, and Southwest Africa.

SPAIN.—Commercial Counsellor, Canadian Embassy, Edificio Espana, Avenida de Jose Antonio 88, Madrid. Territory includes Balearic Islands, Canary Islands, Gibraltar, Rio Muni and Rio de Oro.

SWEDEN.—Commercial Secretary, Canadian Embassy, Strandvagen, 7-C, Stockholm. Territory includes Finland.

SWITZERLAND.—Commercial Counsellor, Canadian Embassy, Kirchenfeldstrasse 88, Berne.

TRINIDAD.—Canadian Government Trade Commissioner, Colonial Bldg., 72 South Quay, Port-of-Spain. Territory includes Barbados, Windward and Leeward Islands, British Guiana, Dutch Guiana, French Guiana, French West Indies, Guadeloupe and Martinique.

UNITED KINGDOM.—Commercial Counsellor, Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1.

Canadian Government Trade Commissioner, Martins Bank Building, Water Street, Liverpool.

Canadian Government Trade Commissioner, 36 Victoria Square, Belfast, Northern Ireland.

UNITED STATES.—Minister (Commercial), Canadian Embassy, 1746 Massachusetts Avenue N.W., Washington 6, D.C.

Deputy Consul General (Commercial), Canadian Consulate General, 620 Fifth Avenue, New York City 20, N.Y.

Consul and Trade Commissioner, Canadian Consulate General, 532 Little Bldg., 80 Boylston Street, Boston 16, Mass.

Consul and Trade Commissioner, Canadian Consulate General, 1412 Garland Bldg., 111 North Wabash Avenue, Chicago, Ill.

Consul and Trade Commissioner, Canadian Consulate, 1139 Penobscot Bldg., Detroit 26, Mich.

Consul and Trade Commissioner, Canadian Consulate General, 510 West Sixth Street, Los Angeles 14, Cal.

Consul and Trade Commissioner, Canadian Consulate General, 215-217 International Trade Mart, New Orleans 12, La.

*Consul General, Canadian Consulate General, 3rd Floor, Kohl Bldg., 400 Montgomery Street, San Francisco 4, Cal.

*Consul General, Canadian Consulate General, The Tower Bldg., Seventh Avenue at Olive Way, Seattle 1, Wash.

URUGUAY.—Commercial Counsellor, Canadian Embassy, No. 1409 Avenida Agraciada, Piso 7º, Montevideo. Territory includes Paraguay and Falkland Islands.

VENEZUELA.—Commercial Secretary, Canadian Embassy, Edificio Pan American, Avenida Urdaneta, Puente Urapal, Candelaria, Caracas. Territory includes Netherlands Antilles.

AGRICULTURAL REPRESENTATIVES

ARGENTINA.—Agricultural Secretary, Canadian Embassy, Bartolome Mitre 478, Buenos Aires.

UNITED KINGDOM.—Commercial Counsellor (Agricultural), Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1.

UNITED STATES.—Agricultural Counsellor, Canadian Embassy, 1746 Massachusetts Avenue N.W., Washington 6, D.C.

* No Foreign Trade Officer at this post.

FISHERIES REPRESENTATIVES

DOMINICAN REPUBLIC.—Assistant Commercial Secretary (Fisheries), Canadian Embassy, Edificio Copello 408, Calle El Conde, Ciudad Trujillo. Territory includes Puerto Rico.

ITALY.—Commercial Secretary (Fisheries), Canadian Embassy, Via G. B. de Rossi 27, Rome.

TIMBER REPRESENTATIVE

UNITED KINGDOM.—Commercial Counsellor (Timber), Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1.

Commodities Branch.—The Commodities Branch is responsible for maintaining the liaison with industry and with export and import trades essential to the foreign trade promotional work of the Department. The Branch assembles trade information and data on products for use by Trade Commissioners in posts abroad, and officers of the Branch maintain contact with industry through personal visits and by exchange of correspondence with this purpose in view. Officers of the Branch follow conditions in foreign markets for the benefit of Canadian traders.

The Branch contains commodity specialists organized in four Divisions: the Machinery and Metals Division, the Forest Products Division, the Chemicals Division, and the Consumer Goods Division. Within these Divisions individual commodity specialists are concerned with such particular groups of products as machine tools and plant equipment, non-ferrous metals, steel, chemicals, lumber, leather and rubber, as well as a very wide range of consumer products. It is the function of the commodity specialist to direct attention of Trade Commissioners to changes in supply conditions and to products available for export, and to relay market news received from Trade Commissioners to Canadian manufacturers and exporters.

The trade promotion work of the Branch begins at the point of finding Canadian products on which to concentrate promotional efforts. Detailed reports on such products are sent to Trade Commissioners throughout the world to encourage market research and promotion and exporters are informed about regulations governing foreign trade.

Agriculture and Fisheries Branch.—The main functions of this Branch include: (1) trade promotion relating to agricultural and fisheries products; (2) the programming, receiving and distributing of information on foreign agriculture and fisheries; and (3) acting as a focal point for liaison on agricultural and fisheries trade matters with the Department of Agriculture, the Department of Fisheries, the Canadian Wheat Board, and other government departments and boards.

In the field of trade promotion, the Grain Division, the Food and Agriculture Division and the Fisheries Division assist Canadian exporters of agricultural and fisheries products in finding markets in other countries. Canadian firms are supplied with information concerning market conditions and requirements in foreign markets, competition from other sources of supply, exchange and tariff restrictions and other related information. Trade Commissioners are kept fully informed on such matters as production and price trends in Canada, quantities of commodities available for export and sources of supply.

The Grain Division assists foreign governments and other buyers in the purchase of Canadian wheat, flour and other cereals. Close contact is maintained with the flour millers as well as daily liaison with the Canadian Wheat Board.

The Commodity Officers concerned with livestock, livestock products, meat, dairy and poultry products, fruits and vegetables, and fish and fisheries products keep in contact with the trade and trade organizations dealing with these commodities. They are in close touch with the officers of other departments of government concerned with the disposition of Canadian production surplus to domestic requirements, and those responsible for such items as health standards, grading and inspection.

A great deal of information pertaining to foreign agriculture and fisheries is received from the Canadian Trade Commissioners. This material, which reflects foreign government policy, production trends and market information, is processed in the Branch and distributed to the departments of government concerned and others interested. Much of it is published in *Foreign Trade*. The Trade Commissioner Service includes a number of officers who deal specifically with agricultural and fisheries matters. Some of these officers are located in Canada's most important export outlets and others in those countries with which Canada competes on world markets, particularly in such commodities as wheat, coarse grains, livestock, meats and dairy products. The information received from the agricultural officers and other Trade Commissioners on foreign agricultural developments is distributed in Canada through publications issued by the Economics Division of the Department of Agriculture and by direct communication with producers and exporters. Fisheries information from abroad is passed immediately to the Department of Fisheries, the provincial departments concerned, the Fisheries Council, and to fish exporters.

International Trade Relations Branch.—This Branch deals with a wide variety of current trade issues, ranging from the analysis of developments in international commercial relations to assisting in the reopening of dollar markets for Canadian products and to finding practical solutions for tariff and other difficulties encountered by Canadian exporters. The Branch has under constant review Canada's trading relations with other countries, and participates in conferences and negotiations under the General Agreement on Tariffs and Trade. In addition, the Branch is concerned with the effects of the work of such international organizations as the Organization for European Economic Co-operation on Canadian and world trade.

Trade treaties are under continuous examination by the Branch, which is responsible for the preparation of material for trade and tariff negotiations with other countries. Material is collected on foreign tariffs, customs legislation, taxes affecting trade, import licensing, exchange regulations, documentation, sanitation, marking and labelling requirements, and measures pertaining to quotas, embargoes and other import restrictions. These data are analysed, interpreted, clarified and made available in easily comprehensible form to exporters, government officials and other export interests.

Exporters who encounter difficulties resulting from the trade policies or regulations of other countries are given expert advice and interpretation of foreign regulations. Also the Branch initiates official consultations with other governments respecting such problems.

Economics Branch.—The Economics Branch maintains a continuous review of business conditions in Canada and conducts special studies on particular industries or on any aspect of Canada's economic development as required. Aspects of the general economic situation considered include foreign trade, investment, consumption, production, prices, incomes and employment, as well as conditions in industries and localities.

Industrial Development Branch.—This Branch co-ordinates the assistance offered by the Federal Government in the establishment of new industries in Canada. Acting in this capacity, information is provided on a multiplicity of matters pertaining to industry establishment. The Branch assists also in solving the variety of problems encountered by Canadian and foreign businessmen. It also aids those established firms that wish to expand into new lines of production. Inquiries from foreign firms and individuals regarding the manufacture of products in Canada under licence or royalty are screened and brought to the attention of Canadian manufacturers interested in producing additional items.

The Branch acts in an advisory capacity to the Immigration Branch of the Department of Citizenship and Immigration regarding the admission of individuals, other than those from Commonwealth countries, who wish to establish new industries in Canada. It also works in close co-operation with a widespread network of organizations throughout Canada, including industrial development departments of the provinces, municipalities, railways, banks, power companies, chambers of commerce, boards of trade, and the Canadian Manufacturers' Association.

Trade Publicity Branch.—The principal function of the Trade Publicity Branch is to furnish the commercial community of Canada with information concerning the assistance that exporters and importers may obtain from the Department of Trade and Commerce. The Branch is responsible also for stimulating a better appreciation by the general public of the importance of trade to the welfare of Canada. The attention of exporters and potential exporters is directed to opportunities for the disposal of their products in markets abroad, and of importers to the sources of supply for raw materials and consumer goods unobtainable in Canada. Its principal educational and informative medium is *Foreign Trade*, fortnightly publication of the Foreign Trade Service, in which are reproduced reports of Canadian Trade Commissioners on conditions in their respective territories, articles by Head Office personnel and economists of the Dominion Bureau of Statistics, news items and charts portraying trade trends. Press releases are prepared and distributed to newspapers at home, and material of similar character dispatched to Canadian Trade Commissioners for distribution to newspapers abroad. Pamphlets and brochures are prepared to supplement other information on foreign markets, sources of supply, documentation, regulations and trade restrictions. Assistance is rendered to correspondents of newspapers and periodicals at home and abroad in the preparation of articles pertaining to various phases of Canada's foreign trade. The educational and promotional work of this Branch is supported by moderate advertising at home and abroad through the daily press, periodicals and trade papers, and by films and radio.

Canadian Government Exhibition Commission.—The Canadian Government Exhibition Commission publicizes Canada by graphic media of all kinds and helps to sell Canadian products abroad. The Commission is solely responsible for the construction and administration of Federal Government exhibits at international expositions, trade fairs and displays outside Canada and of international trade fairs in Canada sponsored by the Government of Canada. The Commission also co-operates with Canadian exporters in securing representation for goods at trade fairs and trade promotional displays, and is equipped to advise individual Canadian companies in the preparation of exhibits. At its various presentations the Commission distributes literature produced by other government departments and agencies.

Export Credits Insurance Corporation.—The Export Credits Insurance Corporation was established under the provisions of the Export Credits Insurance Act 1944 (amended in 1946, 1948, 1954 and 1957). The Corporation, which is administered by a Board of Directors including the Deputy Minister of Trade and Commerce, the Deputy Minister of Finance and the Governor of the Bank of Canada, insures persons carrying on business in Canada against risks involved in the export, manufacture, treatment or distribution of goods or the rendering of engineering, construction, technical or similar services. The main risks covered include: insolvency or protracted default on the part of the buyer; exchange restrictions in the buyer's country preventing the transfer of funds to Canada; cancellation of an import licence or the imposition of restrictions on the importation of goods not previously subject to restrictions; the occurrence of war between the buyer's country and Canada, or of war, revolution, etc., in the buyer's country.

The insurance is available under three main classifications: general commodities capital goods, and services. Coverage for general commodities may be procured by exporters under two types of policies: (1) the Contracts Policy, which insures an exporter against loss from the time he books the order until payment is received; or (2) the Shipments Policy, obtainable at lower rates of premium and covering the exporter from the time of shipment until payment is received. These policies are issued on a yearly basis, covering exporters' sales to all countries.

Insurance of capital goods offers protection to exporters dealing in plant equipment, heavy machinery, etc., where extended credit for lengthy periods is often necessary. Specific policies are issued for transactions involving capital goods but the general terms and conditions are the same as those applicable to policies for general commodities. Specific

policies are also issued to cover engineering, construction, technical or similar services contracts entered into between Canadian firms and persons in foreign countries who have agreed to purchase such services.

The Corporation insures exporters on a co-insurance basis up to a maximum of 85 p.c. of the gross invoice value of shipments. This co-insurance basis also operates in the distribution of recoveries obtained after payment of a loss, and these recoveries are shared by the Corporation and the exporter in the proportions of 85 and 15 p.c., respectively.

The Corporation, from its inception to Dec. 31, 1956, insured export sales valued at \$376,000,000. Premium income was \$3,207,751, and gross claims paid to exporters during the same period amounted to \$7,821,612. A large majority of these claims resulted from exchange transfer difficulties with relatively few arising from insolvencies. Recoveries made amounted to \$4,306,132. The balance at credit of the underwriting reserve as at Dec. 31, 1956, was \$1,418,103.

International Economic and Technical Co-operation Division.—The administration of Canada's participation in the Colombo Plan, a co-operative effort to help the peoples of South and Southeast Asia to raise their standards of living and productivity, is the responsibility of this Division. This contribution is of two types—capital aid and technical co-operation. Under capital assistance, grants of goods or services are made to countries in the area on a government-to-government basis. Technical co-operation embraces the training of Asian peoples in a variety of fields in Canada and the supplying of Canadian technical and professional personnel to advise and instruct abroad. The Division also assists the United Nations and its specialized agencies in the recruiting of technical experts and in the arrangement of courses of instruction for trainees sent to Canada for study. For the year ended Mar. 31, 1957, \$34,400,000 was voted by Parliament for Colombo Plan capital aid and technical assistance.

Section 2.—The Development of Tariffs

A short sketch of trade and tariffs prior to Confederation is given in the 1940 Year Book, pp. 480-482. The 1942 Year Book, pp. 427-428, traces the development from Confederation to the adoption in 1904 of the present form of preferential tariff.

Limitations of space in the Year Book has made it necessary, in regard to tariffs, to adopt the policy of confining any detail regarding commodities and countries to tariff relationships in force at present and to summarize as much as possible historical data and details of preceding tariffs, giving references to those editions of the Year Book where extended treatments may be found.

Subsection 1.—The Canadian Tariff Structure*

The Canadian Tariff consists, in the main, of three sets of tariff rates—British Preferential, Most-Favoured-Nation, and General.

British Preferential Tariff rates are, with some exceptions, the lowest rates. They are applied to imported dutiable commodities shipped direct to Canada from countries of the Commonwealth and from the British colonies and other dependent overseas territories. Some Commonwealth countries have trade agreements with Canada which provide for rates of duty, on certain specified goods, lower than the British Preferential rates.

Most-Favoured-Nation rates are usually higher than the British Preferential rates and lower than the General Tariff rates. They are applied to commodities imported from countries outside the Commonwealth with which Canada has made trade agreements. The most important trade agreement concerning the effective rates applied to goods imported from countries entitled to Most-Favoured-Nation rates is the General Agreement on Tariffs and Trade (GATT).

* The schedules and rates in force at any particular time may be obtained from the Department of National Revenue, Ottawa, which administers the Canadian Tariff.

General Tariff rates are applied to goods imported from the few countries with which Canada has not made trade agreements.

There are numerous goods which are duty free under the British Preferential Tariff, or under both the British Preferential and Most-Favoured-Nation Tariff, or under all Tariffs.

Valuation.—Sect. 35 of the Customs Act provides that, when any *ad valorem* duty is imposed, the valuation of the goods for purposes of calculating the duty basically "shall be the fair market value, at the time when and place from which the goods were shipped to Canada, of like goods when sold in like quantities for home consumption in the ordinary course of trade under fully competitive conditions and under comparable conditions of sale" or "the amount for which the goods were sold by the vendor abroad to the purchaser in Canada, exclusive of all charges thereon after their shipment from the place from which they were exported direct to Canada", whichever is the greater. There are further provisions for determining the value for duty when the fair market value, in accordance with the foregoing, cannot be ascertained. Internal taxes in the country of export (when not incurred on exported goods), the cost of shipping the goods to Canada, and similar charges however are not included in the value for duty.

Dumping.—Sect. 6 of the Customs Tariff provides that when the actual selling price of goods being imported is less than their fair market value and the goods are of a class or kind made or produced in Canada, a special or dumping duty shall be collected. This duty is to be equal to the difference between the actual selling price and the fair market value of the goods, except that it may not be more than 50 p.c. of the value for duty. These provisions are designed to offset the advantage foreign exporters may achieve by exporting to Canada at less than the going prices.

Drawback.—There are provisions in the Customs and Excise Tax Acts for the repayment of a portion of the duty, sales and/or excise taxes paid on imported goods used in the manufacture of products later exported. The purpose of these drawbacks (as these repayments are called) is to assist Canadian manufacturers to compete in foreign markets with foreign producers of similar goods. A second class of drawback, known as "home consumption" drawbacks, is provided for under the Customs Tariff Act and applies to imported materials and/or parts used in the production of specified goods to be consumed in Canada.

The Tariff Board.—The Tariff Board, constituted by the Tariff Board Act 1931, consists of five members, one of whom is chairman and two are vice-chairmen. The duties and powers of the Board derive from three Statutes of Canada: the Tariff Board Act, the Customs Act, and the Excise Tax Act.

Under the Tariff Board Act, the Board makes inquiry into and reports upon any matter in relation to goods that, if brought into Canada or produced in Canada, are subject to or exempt from duties of customs or excise and on which the Minister of Finance desires information. The investigation into any such matter may include inquiry as to the effect that an increase or decrease of the existing rate of duty upon a given commodity might have upon industry or trade and the extent to which the consumer is protected from exploitation. It is also the duty of the Board to inquire into any other matter in relation to the trade and commerce of Canada that the Governor in Council sees fit to refer to the Board for inquiry and report. Usually the references take one of two forms: authority for review of sections of the Customs Tariff relating to an entire industry, or for investigation in respect of specified commodities. Reports are tabled in Parliament.

Under the provisions of the Customs Act and the Excise Tax Act, the Tariff Board acts as a court to hear appeals from rulings of the Department of National Revenue in respect of matters of administration including those of excise taxes, tariff classification, value for duty, and drawback of customs duties. Declarations of the Board on appeals on questions of fact are final and conclusive, with provision for appeal on questions of law

to the Exchequer Court of Canada. Tariff references and appeals receive public hearings at which interested parties submit oral statements and written briefs relating to matters under consideration.

Subsection 2.—Tariff and Trade Arrangements with Other Countries as at Oct. 1, 1957

Canada's tariff arrangements with other countries fall into three main categories: trade agreements with a number of Commonwealth countries; the General Agreement on Tariffs and Trade (GATT); and other agreements and arrangements.

The Commonwealth countries with which Canada has trade agreements are as follows: Australia, British West Indies, Ireland, New Zealand, Union of South Africa and the United Kingdom and Colonies. A preferential arrangement is also in force with respect to the Federation of Rhodesia and Nyasaland and preferences are accorded by Canada to India and Pakistan. Tariff relations between Canada and Ceylon, Ghana and the Federation of Malaya are governed by the Canada-United Kingdom agreement. These agreements and arrangements have been modified and supplemented by the GATT. Canada exchanges most-favoured-nation treatment with 34 countries under the General Agreement on Tariffs and Trade. The Protocol of Provisional Application of the General Agreement on Tariffs and Trade was signed by Canada on Oct. 30, 1947, and brought the Agreement provisionally into force on Jan. 1, 1948.

The GATT is a multilateral trade Agreement providing for scheduled tariff concessions and the exchange of most-favoured-nation treatment among the contracting parties and laying down rules and regulations to govern the conduct of international trade. Under the system of multilateral tariff negotiations initiated under the GATT, four general rounds of negotiations have taken place: at Geneva, Switzerland, in 1947; at Annecy, France, in 1949; at Torquay, England, in 1950-51; and again at Geneva in 1955. The tariff concessions Canada granted and received at the first Geneva Conference are described in the 1948-49 Year Book, pp. 875-877, and those negotiated at Annecy are discussed in the 1950 Year Book, pp. 968-970. The Torquay negotiations are discussed in the 1952-53 edition, pp. 996-997. The existing tariff concessions remain in force until Jan. 1, 1958, and thereafter unless modified in accordance with the terms of the Agreement.

Canada already had most-favoured-nation trade agreements with a number of GATT members prior to the effective date of the General Agreement. These agreements with individual countries continue in force in conjunction with the General Agreement. As an exception, however, the Canada-U.S. Trade Agreement of 1938 is suspended for so long as both countries continue to be contracting parties to GATT.

Tariff and Trade Arrangements with Commonwealth Countries as at Oct. 1, 1957

Country	Agreement	Principal Terms
AUSTRALIA.....	Trade Agreement signed July 8, 1931; in force Aug. 3, 1931. GATT effective Jan. 1, 1948.	Agreement includes schedules of tariff rates and exchange of British preferential rates on items not scheduled. May be terminated on six months notice.
BRITISH WEST INDIES (BARBADOS, JAMAICA, LEEWARD AND WINDWARD ISLANDS, TRINIDAD AND TOBAGO), BERMUDA, BRITISH GUIANA, AND BRITISH HONDURAS.	Trade Agreement signed July 6, 1925, in force Apr. 30, 1927; Canadian notice of termination of Nov. 23, 1938, was replaced by notice of Dec. 27, 1939, which continued the Agreement. The British West Indies (except Jamaica), Bermuda, British Guiana and British Honduras participate in GATT.	The parties exchange specified tariff preferences. Agreement may be terminated on six months notice.

**Tariff and Trade Arrangements with Commonwealth Countries as at
Oct. 1, 1957—continued**

Country	Agreement	Principal Terms
CEYLON.....	Ceylon is a party to the Trade Agreement of 1937 between United Kingdom and Canada. GATT effective July 29, 1948.	Canada and Ceylon exchange preferential tariff treatment.
GHANA.....	Ghana is a party to the Trade Agreement of 1937 between Canada and the United Kingdom.	Canada grants Ghana the British preferential rates.
INDIA.....	Since 1897 Canada has unilaterally accorded British preferential treatment to India but without contractual obligation. GATT effective July 8, 1948.	In addition to preferences granted to India, most-favoured-nation treatment is exchanged under GATT.
IRELAND.....	Trade Agreement signed Aug. 20, 1932; in force Jan. 2, 1933.	Canada grants British preferential tariff in return for preferential rates where such exist and for most-favoured-nation rates on non-preferential items. May be terminated on six months notice.
FEDERATION OF MALAYA....	Malaya is a party to the Trade Agreement of 1937 between Canada and the United Kingdom.	Canada grants Malaya British preferential rates in return for such preferences as exist in the Malayan tariff.
NEW ZEALAND.....	Trade Agreement signed Apr. 23, 1932; in force May 24, 1932. GATT effective July 26, 1948.	The parties exchange specific preferences on scheduled goods and reciprocally concede British preferential rates on items not scheduled. May be terminated on six months notice.
PAKISTAN.....	Canada unilaterally accords Pakistan British preferential treatment but without contractual obligation. GATT effective July 30, 1948.	In addition to preferences granted to Pakistan, most-favoured-nation treatment is exchanged under GATT.
FEDERATION OF RHODESIA AND NYASALAND.	Northern Rhodesia and Nyasaland are parties to Agreement of 1937 between Canada and United Kingdom; an Agreement of 1932 between Canada and Southern Rhodesia expired in 1938, but the tariff treatment provided therein continues to be reciprocally accorded. GATT effective in Southern Rhodesia May 19, 1948; extended to whole Federation, Oct. 29, 1954.	Canada exchanges preferential tariffs with Northern and Southern Rhodesia. Canada accords Nyasaland the British preferential rates.
UNION OF SOUTH AFRICA..	Trade Agreement signed Aug. 20, 1932; in force Oct. 13, 1932. Exchange of notes Aug. 2-31, 1935; effective retroactive from July 1, 1935. GATT effective June 14, 1948.	Agreement includes schedules of tariff preferences granted by each country. May be terminated on six months notice. Exchange of most-favoured-nation treatment. May be terminated on six months notice.

**Tariff and Trade Arrangements with Commonwealth Countries as at
Oct. 1, 1957—concluded**

Country	Agreement	Principal Terms
UNITED KINGDOM.....	Trade Agreement signed Feb. 23, 1937; in force Sept. 1, 1937. Modified by an exchange of letters of Nov. 16, 1938, and an exchange of notes Oct. 30, 1947. GATT effective Jan. 1, 1948.	Various concessions by both countries including exchange of preferential tariff rates (some minor reservations by Canada). Extends to Colonies.

**Tariff and Trade Arrangements with Non-Commonwealth Countries as at
Oct. 1, 1957**

Country	Agreement	Principal Terms
ARGENTINA.....	Trade Agreement signed Oct. 2, 1941; provisionally in force Nov. 15, 1941.	Exchange of most-favoured-nation treatment. Provisional application may be terminated on three months notice.
AUSTRIA.....	GATT effective Oct. 19, 1951.	Exchange of most-favoured-nation treatment.
BELGIUM-LUXEMBOURG....	Convention of Commerce with Belgium-Luxembourg Economic Union (including Belgian colonies) entered into effect Oct. 22, 1924. GATT effective Jan. 1, 1948.	Exchange of most-favoured-nation treatment. May be terminated on one years notice.
BOLIVIA.....	Order in Council of July 20, 1935, accepted Article 15 of the United Kingdom-Bolivia Treaty of Commerce of Aug. 1, 1911.	Exchange of most-favoured-nation treatment. May be terminated on one years notice.
BRAZIL.....	Trade Agreement signed Oct. 17, 1941; provisionally in force from date of signing and definitively on Apr. 16, 1943. GATT effective July 31, 1948.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
BURMA.....	GATT effective July 29, 1948.	Exchange of most-favoured-nation treatment.
CAMBODIA.....	Franco-Canadian Trade Agreement of 1933 applied to Cambodia.	Since the creation of Cambodia as an independent state in 1955, Canada has continued to grant most-favoured-nation rates.
CHILE.....	Trade Agreement signed Sept. 10, 1941; provisionally in force Oct. 15, 1941, and definitively on Oct. 29, 1943. GATT effective Mar. 16, 1948.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
CHINA.....	<i>Modus vivendi</i> signed Sept. 26, 1946; in effect since Sept. 28, 1946. China withdrew from GATT on May 5, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.

**Tariff and Trade Arrangements with Non-Commonwealth Countries as at
Oct. 1, 1957—continued**

Country	Agreement	Principal Terms
COLOMBIA.....	Treaty of Commerce with United Kingdom of Feb. 16, 1866, applies to Canada. Modified by protocol of Aug. 20, 1912, and exchange of notes Dec. 30, 1938. A Trade Agreement between Colombia and Canada was signed Feb. 20, 1946, but has not been put into force.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
COSTA RICA.....	<i>Modus vivendi</i> signed Nov. 18, 1950; brought into force Jan. 26, 1951.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
CUBA.....	GATT effective Jan. 1, 1948.	Exchange of most-favoured-nation treatment (excluding preferences accorded by Cuba to the United States).
CZECHOSLOVAKIA.....	Convention of Commerce signed Mar. 15, 1928; in force Nov. 14, 1928. GATT effective May 21, 1948.	Exchange of most-favoured-nation treatment. May be terminated on one years notice.
DENMARK (including GREENLAND).	Treaties of Peace and Commerce with United Kingdom of Feb. 13, 1660 and July 11, 1670, apply to Canada. GATT effective May 28, 1950.	Exchange of most-favoured-nation treatment. Declaration of May 9, 1912, provides means for separate termination by Dominions on one years notice.
DOMINICAN REPUBLIC.....	Trade Agreement signed Mar. 8, 1940; in force provisionally Mar. 15, 1950, and definitively Jan. 22, 1941. GATT effective May 19, 1950.	Exchange of most-favoured-nation treatment including scheduled concessions. May be terminated on six months notice.
ECUADOR.....	<i>Modus vivendi</i> signed Nov. 10, 1950; in force Dec. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
EGYPT.....	Exchange of notes Nov. 26 and Dec. 3, 1952; in force Dec. 3, 1952.	Exchange of most-favoured-nation rates. May be terminated on six months notice.
EL SALVADOR.....	Exchange of notes of Nov. 2, 1937; in force Nov. 17, 1937.	Exchange of most-favoured-nation treatment. May be terminated on four months notice.
ETHIOPIA.....	Exchange of notes effective June 3, 1955.	Exchange of most-favoured-nation treatment.
FINLAND.....	Exchange of notes of Nov. 13-17, 1948; effective Nov. 17, 1948. GATT effective May 25, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
FRANCE AND FRENCH OVERSEAS TERRITORIES.	Trade Agreement signed May 12, 1933; in force June 10, 1933. Exchange of notes of Sept. 29, 1934, and additional protocol of Feb. 26, 1935. GATT effective Jan. 1, 1948.	Exchange of most-favoured-nation treatment including scheduled concessions. May be terminated on three months notice.
GERMANY, FEDERAL REPUBLIC OF	GATT effective Oct. 1, 1951.	Exchange of most-favoured-nation treatment.

**Tariff and Trade Arrangements with Non-Commonwealth Countries as at
Oct. 1, 1957—continued**

Country	Agreement	Principal Terms
GREECE.....	<i>Modus vivendi</i> by exchange of notes of July 24-28, 1947; effective Aug. 28, 1947. GATT effective Mar. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
GREENLAND.....	(See Denmark.)	
GUATEMALA.....	Trade Agreement signed Sept. 28, 1937; in force Jan. 14, 1939.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
HAITI.....	Trade Agreement signed Apr. 23, 1937; in force Jan. 10, 1939. GATT effective Jan. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
HONDURAS.....	Exchange of notes signed July 11, 1956, effective July 18, 1956. Ratified in Honduras Sept. 5, 1956.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
ICELAND.....	Although there is no contractual obligation, Canada and Iceland adhere to the terms of a treaty originally concluded between Denmark and the United Kingdom on Feb. 13, 1660.	Exchange of most-favoured-nation treatment.
INDONESIA.....	GATT effective Mar. 1, 1948.	Exchange of most-favoured-nation treatment.
IRAN.....	Special arrangement by Order in Council effective Feb. 1, 1951.	Canada grants most-favoured-nation tariff rates as long as Iran accords reciprocal treatment.
IRAQ.....	Special arrangement by Order in Council effective Sept. 15, 1951.	Canada grants and receives most-favoured-nation tariff rates.
ISRAEL.....	Canada-United Kingdom Agreement of 1937 applied under the British Palestine Mandate.	Since the creation of the State of Israel in May 1948, Canada has continued to grant most-favoured-nation rates.
ITALY.....	<i>Modus vivendi</i> by exchange of notes of Apr. 23-28, 1948; effective Apr. 28, 1948. GATT effective Jan. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
JAPAN.....	Agreement on Commerce signed Mar. 31, 1954; effective June 7, 1954. GATT effective Sept. 10, 1955.	Exchange of most-favoured-nation treatment. Remains in force for one year from ratification and thereafter unless terminated on three months notice.
LAOS.....	Franco-Canadian Trade Agreement of 1933 applied to Laos.	Since the creation of Laos as an independent State in 1955, Canada has continued to grant most-favoured-nation rates.
LEBANON.....	Special arrangement by Order in Council of Nov. 19, 1946. Lebanon withdrew from GATT Mar. 1, 1951.	Canada grants most-favoured-nation tariff rates as long as Lebanon accords reciprocal treatment.
LIBERIA.....	Special arrangement by Order in Council of June 3, 1955. Liberia withdrew from GATT June 1, 1953.	Canada grants most-favoured-nation tariff rates as long as Liberia accords reciprocal treatment.

**Tariff and Trade Arrangements with Non-Commonwealth Countries as at
Oct. 1, 1957—continued**

Country	Agreement	Principal Terms
LIECHTENSTEIN.....	(See Switzerland.)	
LUXEMBOURG.....	(See Belgium.)	
MEXICO.....	Trade Agreement signed Feb. 8, 1946; in force provisionally same date. Ratifications exchanged on May 6, 1947; definitively in force 30 days from that date.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
MOROCCO.....	Various agreements applied to French, Spanish and International Zones of Morocco.	Since the creation of Morocco as an independent State in 1956, Canada has continued to grant most-favoured-nation rates.
NETHERLANDS.....	Convention of Commerce of July 11, 1924. Suspended during war; reinstated by exchange of notes Feb. 1 and 5, 1946. Includes Netherlands Antilles and Surinam. GATT effective Jan. 1, 1948.	Exchange of most-favoured-nation treatment. May be terminated on one years notice.
NICARAGUA.....	Trade Agreement signed Dec. 19, 1946; in force provisionally same date. GATT effective May 28, 1950.	Exchange of most-favoured-nation treatment. Provisional application may be terminated on three months notice.
NORWAY.....	Convention of Commerce and Navigation with United Kingdom of Mar. 18, 1826, applied to Canada. GATT effective July 10, 1948.	Exchange of most-favoured-nation treatment. Convention of May 16, 1913, provides means for separate termination by Dominions on one years notice.
PANAMA.....	Order in Council of July 20, 1935, accepted Article 12 of United Kingdom—Panama Treaty of Commerce of Sept. 25, 1928. Treaty terminated in 1942.	While contractual obligation has expired, Canada and Panama continue to exchange most-favoured-nation treatment.
PARAGUAY.....	Exchange of notes of May 21, 1940; in force June 21, 1940.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
PERU.....	GATT effective Oct. 8, 1951.	Exchange of most-favoured-nation treatment.
PHILIPPINES.....	No agreement at present. United States—Canada Agreement of 1938 (now suspended) applied to Philippines until Philippines attained independence in 1946.	Canada and Philippines continue to exchange most-favoured-nation treatment but without contractual obligation.
POLAND.....	Convention of Commerce signed July 3, 1935; in force Aug. 15, 1936.	Exchange of most-favoured-nation treatment including scheduled reductions. May be terminated on three months notice.
PORTUGAL, PORTUGUESE ADJACENT ISLANDS AND PORTUGUESE OVERSEAS PROVINCES.	Trade Agreement signed May 28, 1954, provisionally in effect July 1, 1954, definitively in force on ratification Apr. 29, 1955.	Exchange of most-favoured-nation treatment. Remains in effect for two years from ratification and thereafter unless terminated on three months notice.

**Tariff and Trade Arrangements with Non-Commonwealth Countries as at
Oct. 1, 1957—continued**

Country	Agreement	Principal Terms
SPAIN AND SPANISH POSSESSIONS.	<p>Since Aug. 1, 1928, Canada has adhered to the United Kingdom—Spain Treaty of Commerce of Oct. 31, 1922.</p> <p>Trade Agreement signed May 26, 1954, provisionally in effect July 1, 1954, definitively in force on ratification June 30, 1955.</p>	<p>Exchange of most-favoured-nation treatment. May be terminated on six months notice.</p> <p>Supplements and amends United Kingdom—Spanish Treaty of Commerce. Remains in effect for three years from ratification, and thereafter unless terminated on three months notice.</p>
SWEDEN.....	<p>United Kingdom—Sweden Convention of Commerce and Navigation of Mar. 18, 1826, applies to Canada.</p> <p>GATT effective May 1, 1950.</p>	<p>Exchange of most-favoured-nation treatment. Declaration of Nov. 27, 1911, provides means for separate termination by Dominions on one years notice.</p>
SWITZERLAND.....	<p>United Kingdom—Switzerland Treaty of Friendship, Commerce and Reciprocal Establishment of Sept. 6, 1855, applies to Canada. By exchange of notes Liechtenstein included under terms of this Agreement, effective Aug. 2, 1947.</p>	<p>Exchange of most-favoured-nation treatment. Convention of Mar. 30, 1914, provides means for separate termination by the Dominions on one years notice.</p>
SYRIA.....	<p>Special Arrangement by Order in Council of Nov. 19, 1946.</p> <p>Syria withdrew from GATT Aug. 6, 1951.</p>	<p>Canada grants most-favoured-nation tariff rates as long as Syria accords reciprocal treatment.</p>
TUNISIA.....	<p>Franco-Canadian Trade Agreement of 1933 applied to Tunisia (Tunisia is in customs union with France).</p>	<p>Since the creation of Tunisia as an independent State in 1956, Canada has continued to grant most-favoured-nation rates.</p>
TURKEY.....	<p>Exchange of notes signed Mar. 1, 1948; in effect Mar. 15, 1948.</p> <p>GATT effective Oct. 17, 1951.</p>	<p>Exchange of most-favoured-nation treatment. May be terminated on three months notice.</p>
UNION OF SOVIET SOCIALIST REPUBLICS.	<p>Trade Agreement signed Feb. 29, 1956. Ratifications exchanged May 26, 1956.</p>	<p>Exchange of most-favoured-nation treatment and undertaking by U.S.S.R. to purchase determined quantity of Canadian wheat. In force for three years from date of signature and may thereafter be extended by mutual agreement.</p>
UNITED STATES.....	<p>Trade Agreement signed Nov. 17, 1933; suspended as long as both countries continue to be contracting parties to GATT.</p> <p>GATT effective Jan. 1, 1948.</p>	<p>Most-favoured-nation treatment exchanged under 1933 Agreement is continued under GATT.</p>
URUGUAY.....	<p>Trade Agreement signed Aug. 12, 1936; in force May 15, 1940. Additional Protocol signed Oct. 19, 1953.</p> <p>GATT effective Dec. 16, 1953.</p>	<p>Exchange of most-favoured-nation treatment. May be terminated on six months notice.</p>
VIETNAM.....	<p>Franco-Canadian Trade Agreement of 1933 applied to Vietnam.</p>	<p>Since the creation of Vietnam as an independent State, Canada has continued to accord most-favoured-nation rates.</p>

**Tariff and Trade Arrangements with Non-Commonwealth Countries as at
Oct. 1, 1957—concluded**

Country	Agreement	Principal Terms
VENEZUELA.....	<i>Modus vivendi</i> signed and brought into force Oct. 11, 1950.	Exchange of most-favoured-nation treatment. Made for one year subject to annual renewal.
YUGOSLAVIA.....	Trade Agreements Act of June 11, 1928, accepted Article 30 of United Kingdom - Serb - Croat - Slovene Treaty of Commerce and Navigation of May 12, 1927; in force Aug. 9, 1928.	Exchange of most-favoured-nation treatment. May be terminated on one years notice.

CHAPTER XXIII.—PRICES*

CONSPECTUS

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SECTION 1. INDEX NUMBERS OF WHOLESALE PRICES.....	1073	SECTION 3. INDEX NUMBERS OF SECURITY PRICES.....	1083
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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Section 1.—Index Numbers of Wholesale Prices

The term “wholesale prices” refers in this Chapter to sales transactions that occur below the retail level; it has more of a connotation of bulk purchase than of any homogeneous level of distribution. Ingredients for the general wholesale price index are obtained mainly from manufacturers but include prices from wholesalers proper, assemblers of primary products, agents and the other types of commercial enterprises who trade in commodities of a type or in quantities characteristic of primary marketing functions. Wholesale price indexes are grouped according to a commodity classification scheme based on chief component material similarities. In addition, indexes classified according to degree of manufacture are available. For the latter, however, because significant groups of manufactured products are not directly included, tabulations are not attempted on narrower bases than “Raw and Partly Manufactured” and “Fully and Chiefly Manufactured” commodity groups. Wholesale price indexes are regularly released in the DBS monthly publication *Prices and Price Indexes* which contains related current series on retail and security prices. Volume 23 of that publication is a historical summary reaching back to the year 1867 for some series and, together with DBS Reference Paper 24, *Wholesale Prices Indexes 1930-1950*, contains an explanation of index construction and meaning.

The number and identity of commodities contained in the index has been virtually fixed since 1951 when the index was placed on a 1935-39 base. Commodities were included either because they bulked large in total marketings at that time or because they were

* Revised in the Prices Division, Dominion Bureau of Statistics.

considered reliable indicators of price change for commodity groups that did. Price movements displayed by the commodities priced are combined in such a way that they influence composite indexes in the proportions of total marketings including imports and exports during the base period.

General wholesale price indexes have been calculated by most countries for many years but the question "What does a general wholesale price index measure?" cannot be given a precise answer. A retail price index can be identified with consumer expenditure, but a general wholesale index covers a much wider range; yet it is not a measure of the purchasing power of money since it does not include prices of land, labour, securities or services, except in so far as prices of these things enter into commodity prices. As a conventional summary figure its use has tended toward a reference level against which to observe the behaviour of particular price groups such as farm products, raw materials and building materials. Thus, special wholesale groupings and commodity price relatives are now considered to be of greater importance than the general index itself.

Component indexes and individual price series have numerous uses. One of the most important is in escalator contracts which contain a price adjustment clause. Other major uses include: studies of replacement and construction costs in investment projects; analysis of price movements of both individual items and commodity groups in relation to purchases and sales; industrial planning and market analysis; valuation for tax purposes and inventory analysis; and studies in changes of physical volume. They are also used by business firms abroad in connection with sales and purchases in Canada.

The general wholesale price index declined moderately during 1957 after a continuous climb beginning in December 1954 and culminating in a postwar peak of 229.2 in January 1957. However, in the last month of the year the index showed some strength, rising to 226.1 from 224.1 in November.

Lower prices for vegetable products, animal products and non-ferrous metals were mainly responsible for the downward movement. Vegetable products began falling off gradually, followed by sharp losses in August to November. The December index, though, was two points above November. Animal products showed little change until June, and then rose to 246.0 in August, the highest point since October 1953. From then until November, lower prices for livestock and meats caused a sharp decline in the index. Prices of copper, lead and zinc have been tumbling since their postwar peak reached in 1956, as indicated by a drop in the group index from 190.4 in December 1956 to 169.3 in December 1957.

Textile products moved slightly higher in the first half of 1957 but lower prices for raw wool at the end of the year brought the index down a little below the December 1956 level. Wood products experienced somewhat the same adjustment but ended slightly above the December 1956 level. Higher steel prices at mid-year resulted in the index for the iron group reaching a peak of 256.5 in September, but a gradual decline placed the December index slightly below that for December 1956. Non-metallic minerals registered slight advances throughout the year, and chemical products changes, while higher on balance, were insufficient to have any effect on the total index.

1.—Annual Index Numbers of Wholesale Price Groups 1948-57 and Monthly Indexes 1956 and 1957

(1935-39=100)

Year and Month	General Whole- sale	Raw and Partly Manu- factured Goods	Fully and Chiefly Manu- factured Goods	Indus- trial Materials	Canadian Farm Products ¹		
					Field	Animal	Total
1948.....	193.4	196.3	192.4	222.7	200.6	263.7	232.1
1949.....	198.3	197.1	199.2	218.0	191.9	265.4	228.7
1950.....	211.2	212.8	211.0	244.6	191.9	281.4	236.7
1951.....	240.2	237.9	242.4	296.1	200.4	336.9	268.6
1952.....	226.0	218.7	230.7	252.6	223.0	277.5	250.2
1953.....	220.7	207.0	228.8	232.3	179.4	263.8	221.6
1954.....	217.0	204.8	224.2	223.7	170.9	256.2	213.6
1955.....	218.9	209.7	224.5	236.0	180.1	245.1	212.6
1956.....	225.6	215.8	231.5	248.2	179.4	246.9	213.2
1957.....	227.4	209.4	237.9	240.3	160.5	258.0	209.2
1956							
January.....	222.0	212.9	227.4	246.1	172.1	235.0	203.5
February.....	222.2	213.3	227.6	247.2	173.2	232.3	202.8
March.....	223.3	214.7	228.4	248.8	177.8	231.1	204.4
April.....	224.6	216.3	229.5	248.9	182.7	231.9	207.3
May.....	225.4	217.3	230.3	247.8	191.5	238.0	214.7
June.....	226.5	219.2	231.3	248.5	196.4	251.9	224.2
July.....	226.6	219.0	231.6	247.4	210.6	256.5	233.5
August.....	227.0	217.0	233.2	249.2	177.2	258.2	217.7
September.....	227.4	216.2	234.4	249.5	166.3	259.6	213.0
October.....	227.0	214.3	234.7	247.7	166.0	256.2	211.1
November.....	226.6	213.3	234.6	247.7	169.0	255.9	212.5
December.....	228.0	216.4	235.1	249.8	170.4	256.4	213.4
1957							
January.....	229.2	217.8	236.3	251.1	172.1	257.2	214.6
February.....	228.2	214.9	236.5	248.4	167.4	259.0	213.2
March.....	228.4	212.5	237.8	247.0	166.3	253.4	209.8
April.....	228.5	211.7	238.4	246.2	165.8	255.1	210.4
May.....	228.0	209.6	238.9	242.2	163.5	255.3	209.4
June.....	228.1	209.8	238.9	240.6	160.6	262.2	211.4
July.....	228.2	209.2	239.5	239.8	161.1	270.2	215.7
August.....	227.6	207.9	239.2	236.8	153.8	271.3	212.6
September.....	227.0	206.9	238.8	236.8	153.2	263.8	208.5
October.....	225.0	203.6	237.4	232.5	152.8	248.6	200.7
November.....	224.1	203.3	236.1	228.9	153.7	245.7	199.7
December.....	226.1	206.0	237.2	231.8	155.4	253.7	204.6

¹ Wheat prices used in this index are Canadian Wheat Board buying prices for Nos. 1, 2 and 3 Manitoba Northern at Fort William-Port Arthur. The initial payment is first used and the index revised as further payments are announced. Between August 1945 and July 1950 the price included for No. 1 Manitoba Northern was \$1.83 per bu. while for subsequent crop years the price per bu. was as follows: 1950-51, \$1.85; 1951-52, \$1.83; 1952-53, \$1.82; 1953-54, \$1.56; 1954-55, \$1.65; 1955-56, \$1.61, for which year the final payment was announced on May 15, 1957. For the crop year 1956-57 the index is based on an initial payment price of \$1.40. Western oats and barley were brought under control of the Canadian Wheat Board Aug. 1, 1949. Since then prices used for Canadian Farm Products have been initial payments to farmers, with participation payments included whenever they are announced.

Index Numbers of Building Materials Prices.—Price movements of materials entering into building construction are currently measured by two special-purpose series: price index numbers of residential building materials and price index numbers of non-residential building materials* for which the base years are 1935-39 and 1949, respectively.

* Exclusive of engineering structures such as power dams, roads, railroads and bridges.

Details of weighting and construction and historical series may be found in the special bulletins* prepared at the time the indexes were first published. More recently the composite indexes have been calculated on an annual basis back to 1913; current indexes are published monthly in DBS Bulletin *Prices and Price Indexes*.

Advances and declines in building material prices in 1957 cancelled each other out so that the index remained fairly steady throughout the year. The residential building material index showed a fractional drop and the non-residential series moved up 2 p.c.

* *Price Index Numbers of Residential Building Materials 1926 to 1948* and DBS Reference Paper No. 43, *Non-residential Building Materials, Price Index, 1935-1952*.

2.—Annual Price Index Numbers of Residential Building Materials 1950-57 and Monthly Indexes 1956 and 1957

(1935-39=100)

Year and Month	Composite Index (1949=100) ¹	Composite Index	Principal Components								Other Materials
			Cement, Sand and Gravel	Brick, Tile and Stone	Lumber and its Products	Lath, Plaster and Insulation	Roofing Material	Paint and Glass	Plumbing and Heating Equipment	Electrical Equipment and Fixtures	
GROUP WEIGHT AS A PERCENTAGE OF TOTAL.....	...	...	42.6	18.6	11.3	7.6	5.0	5.0	3.8	3.2	2.9
1950.....	106.4	242.7	131.3	163.8	349.2	116.7	235.4	174.8	183.2	184.5	181.1
1951.....	125.5	286.2	140.9	180.7	425.0	126.3	235.8	197.8	210.4	213.3	212.7
1952.....	124.9	284.8	149.5	195.3	415.7	128.5	217.7	194.9	215.6	212.0	226.3
1953.....	123.9	282.6	151.8	205.8	410.6	128.5	218.6	203.8	200.0	211.4	229.5
1954.....	121.7	277.5	151.3	207.4	400.5	128.8	233.4	208.9	202.8	207.7	226.6
1955.....	124.3	283.4	149.4	209.5	409.4	125.3	244.5	219.7	207.2	229.2	230.3
1956.....	128.5	292.9	149.7	218.8	420.2	130.8	259.6	226.9	217.9	243.7	243.7
1957.....	128.4	292.8	153.6	223.8	415.2	136.9	253.3	225.4	227.6	209.2	253.8
1956											
January.....	127.1	289.9	149.6	209.3	416.7	127.3	261.2	228.0	214.1	248.4	238.8
February.....	127.1	289.9	149.6	209.3	416.6	127.3	261.2	226.3	214.6	248.4	238.8
March.....	127.9	291.6	149.6	216.8	419.4	127.3	254.3	226.3	214.6	256.0	241.0
April.....	128.8	293.7	149.6	216.8	423.4	130.0	253.9	228.0	214.6	256.4	241.0
May.....	129.1	294.4	149.3	221.3	424.6	130.0	253.9	228.0	214.6	256.3	241.0
June.....	129.0	294.1	149.3	221.3	423.2	130.6	264.8	226.7	214.6	255.6	241.0
July.....	129.0	294.2	149.8	221.3	423.6	132.9	264.8	226.7	216.1	238.3	241.0
August.....	129.0	294.2	149.8	221.3	421.5	132.9	264.8	226.7	219.9	238.3	244.0
September.....	128.7	293.5	149.8	221.3	418.8	132.9	264.8	226.7	221.5	237.9	248.5
October.....	128.8	293.6	149.8	222.2	418.4	132.9	261.6	226.7	223.0	237.1	248.5
November.....	128.7	293.4	149.8	222.2	418.8	132.9	255.2	226.7	223.8	225.9	250.4
December.....	128.4	292.7	150.4	222.2	417.6	132.9	255.2	225.8	223.0	225.4	250.4
1957											
January.....	128.8	293.6	152.8	225.5	418.9	132.9	255.2	225.6	223.0	225.1	250.4
February.....	128.8	293.7	153.8	225.5	417.8	133.0	255.2	224.3	225.7	218.9	255.6
March.....	128.9	293.8	153.8	223.5	418.4	133.0	258.7	223.9	226.3	213.9	255.6
April.....	128.9	293.9	153.3	223.5	418.5	134.0	255.5	223.9	226.6	213.9	255.6
May.....	129.3	294.8	153.7	223.5	418.9	138.7	255.5	223.9	227.7	213.9	254.1
June.....	129.1	294.3	153.7	223.5	418.0	138.7	255.5	223.9	227.7	213.6	253.3
July.....	129.1	294.3	153.7	223.5	417.6	138.7	255.5	228.0	229.3	206.2	252.6
August.....	128.8	293.6	153.7	223.5	416.5	138.7	252.3	226.3	229.4	203.8	252.6
September.....	128.4	292.7	153.7	223.5	414.5	138.7	252.3	226.3	229.4	200.2	254.0
October.....	127.8	291.4	153.7	223.5	411.3	138.7	252.3	226.3	229.4	201.3	254.0
November.....	126.6	288.7	153.7	223.5	406.2	138.7	245.9	226.3	228.1	200.5	254.0
December.....	126.5	288.5	154.0	223.5	405.9	138.7	245.9	226.3	228.1	198.6	254.0

¹ Arithmetically converted to base 1949=100 for comparability with price indexes of non-residential building materials shown in Table 3.

3.—Annual Price Index Numbers of Non-residential Building Materials 1950-57 and Monthly Indexes 1956 and 1957

(1949 = 100)

Year and Month	Composite Index	Principal Components						
		Steel and Metal Work	Plumbing, Heating and Other Equipment	Electrical Equipment and Materials	Aggregate, Cement and Concrete Mix	Lumber and Lumber Products	Blocks, Brick and Stone	Tile
GROUP WEIGHT AS A PERCENTAGE OF TOTAL	...	20.1	21.4	11.5	11.1	10.5	9.1	3.8
1950.....	105.0	107.3	103.0	105.8	103.2	110.3	104.3	104.9
1951.....	118.6	122.0	115.7	125.4	111.3	128.3	113.0	110.6
1952.....	123.2	131.3	121.3	121.7	117.4	127.9	119.7	115.5
1953.....	124.4	134.7	119.2	119.6	120.2	127.8	125.9	117.1
1954.....	121.8	128.2	115.2	117.6	120.9	124.5	127.0	120.6
1955.....	123.4	129.9	118.0	121.3	120.3	127.6	127.0	120.3
1956.....	128.0	139.0	123.4	123.6	117.0	131.5	130.3	120.8
1957.....	130.0	147.7	124.1	118.4	119.4	128.7	134.0	118.5
1956								
January.....	126.3	135.1	121.7	124.9	117.5	130.2	127.3	120.1
February.....	126.5	135.2	122.6	124.9	117.5	130.2	126.9	120.1
March.....	127.0	135.2	122.4	126.1	115.8	131.7	129.8	120.7
April.....	127.1	135.3	122.4	126.1	115.6	132.4	129.8	121.8
May.....	127.2	135.3	122.4	125.9	115.5	132.8	131.0	121.6
June.....	127.5	135.7	122.4	125.8	116.1	132.6	131.0	122.0
July.....	127.2	135.6	122.3	123.0	116.7	132.8	131.2	119.3
August.....	129.4	144.0	124.3	123.0	116.7	132.3	130.2	123.1
September.....	129.2	144.1	124.8	120.5	116.7	131.2	130.2	120.4
October.....	129.8	144.1	125.2	122.1	117.8	130.9	132.2	121.0
November.....	129.5	144.0	125.2	120.2	117.8	130.6	132.2	120.1
December.....	129.7	144.2	125.1	120.2	120.2	129.9	132.2	119.7
1957								
January.....	129.8	144.3	124.7	120.1	120.9	129.7	133.4	119.6
February.....	130.0	144.8	125.7	119.1	121.2	129.4	133.4	119.8
March.....	130.1	144.8	125.5	119.5	121.3	129.4	133.4	119.8
April.....	129.8	144.9	124.1	119.5	121.2	129.5	133.4	119.8
May.....	129.6	145.2	123.8	119.5	118.7	129.7	133.4	119.8
June.....	129.4	145.2	123.3	119.4	118.1	129.5	134.3	117.2
July.....	130.5	150.7	124.0	118.2	118.1	129.6	134.3	117.2
August.....	130.4	150.7	123.9	117.8	118.1	129.0	134.3	118.2
September.....	130.3	150.6	123.8	116.9	118.1	128.5	134.6	118.0
October.....	130.3	150.5	123.8	118.3	118.1	127.6	134.6	117.7
November.....	130.1	150.6	123.3	118.4	118.1	126.2	134.6	117.7
December.....	130.0	150.7	123.3	114.7	120.4	126.1	134.6	117.7

World Wholesale Price Indexes.—Price changes within different countries have varied widely during the years. Comparisons of Canadian wholesale price indexes and those of other countries are given in Table 4.

4.—Index Numbers of Wholesale Prices in Canada and Other Countries 1955 and 1956

(BASE: 1953=100. SOURCE: *United Nations Monthly Bulletin of Statistics*, November 1957.)

Country	1955	1956	Country	1955	1956
Belgium.....	101	104	Iran.....	115	123
Brazil.....	147	176	Israel.....	124	131
Canada.....	99	102	Korea, South.....	225	303
Chile.....	277	454	Netherlands.....	102	104
Denmark.....	103	107	New Zealand.....	100	104
Dominican Republic.....	95	94	Norway.....	104	109
Egypt.....	99	110	Sweden.....	104	109
France.....	98	102	Switzerland.....	101	103
Germany (Western).....	101	103	Turkey.....	119	142
Greece.....	120	129	United Kingdom.....	105	107
India.....	87	97	United States.....	101	104

Section 2.—Consumer Price Index

The Consumer Price Index was constructed to replace the Cost-of-Living Index and was first published in October 1952. The purpose of the new index was the same as that of the old—to measure the average percentage change in retail prices of goods and services bought by a large and representative group of Canadian urban families. DBS report *The Consumer Price Index, January 1949-August 1952* contains detailed information on such aspects of the new index as purpose, family coverage, base period, and details of items included as well as their relative importance. It also gives the formula used in calculating the index, outlines methods of price collection and explains special features, such as methods of incorporating seasonal variations in food consumption, and changes in the price element of home-ownership costs.

Since the base year, 1949, the consumer price index has experienced several distinct periods of varying price movement which are summarized below.

Years 1950-51.—This was a period of first moderate and then accelerating price increases during which the index rose from 100.1 in January 1950 to 106.6 in December 1950 and to 118.1 by December 1951. Much of this price movement resulted from the impact of the Korean war.

Years 1952-53.—After continuing to rise to 118.2 in January 1952, a sequence of generally downward adjustments occurred bringing the index to 114.4 in May 1953, the lowest point since June 1951, 3.2 p.c. below the January 1952 peak. Minor increases brought the index back to 115.8 by December 1953.

Years 1954-55.—This two-year period proved to be the most stable since the end of World War II as the index moved narrowly around the 116 level, averaging 116.2 in 1954 and 116.4 in 1955. Monthly movements throughout these two years were mainly seasonal and reflected no clearcut upward or downward trends.

Years 1956-57.—After a continuance of the stability of 1954-55 in the early months of 1956, with the May index at 116.6, a moderate but continuing upward trend developed. The previous postwar peak was passed when the index reached 118.5 in July and the trend continued upward to 120.4 by December and to 123.4 by the following October, dropping slightly to 123.1 in December of 1957.

Throughout the period since 1949, significant variations in movement took place in the major components of the consumer price index. Some of the trends, by groups, are examined below.

Food.—Following a fairly steady period in the first half of 1950, foods started a rapid and continuous climb to a peak of 122.5 in November-December of 1951, a level not equalled again up to mid-1957. Fairly sharp declines throughout the first half of 1952 brought the index back to around 116 and it held remarkably steady at about that level, except for seasonal changes, until early 1956 when it dropped to 109.1 in March. However, by May it had risen to 109.3 and recorded a steady advance to 121.9 in September 1957 but dropped again to 118.8 by the end of the year.

Non-food.—This group also climbed to a peak in the latter half of 1951, but to a somewhat lower level of about 116. It then experienced a long but very gradual decline to reach a low point of 110 in mid-1955. Subsequently it developed a steady, gradual trend upwards, standing at about 115 in December 1957.

Services (excluding shelter).—Unlike both food and non-food commodity groupings which reflected considerable price adjustments to lower levels following the Korean war peak of late 1951, services experienced an uninterrupted rise throughout the entire period 1949 to the end of 1957, showing toward the end of that period a distinct tendency to increase at an even more rapid rate. As of December 1957 services recorded the largest over-all increase since 1949 of all groups discussed here.

Shelter.—This component, which covers rents only, rose steadily from 1949 to December 1957. However, though continuing to rise throughout the period, there was a flattening in the rate of increase after late 1955.

5.—Annual Consumer Price Index 1950-57 and Monthly Indexes 1956 and 1957

(1949=100)

Year and Month	Food	Household Operation	Shelter	Clothing	Other Commodities and Services	Composite Index
GROUP WEIGHT AS A PERCENTAGE OF TOTAL.....	31.7	17.3	14.8	11.5	24.7	100.0
1950.....	102.6	102.4	106.2	99.7	103.1	102.9
1951.....	117.0	113.1	114.4	109.8	111.5	113.7
1952.....	116.8	116.2	120.2	111.8	116.0	116.5
1953.....	112.6	117.0	123.6	110.1	115.8	115.5
1954.....	112.2	117.4	126.5	109.4	117.4	116.2
1955.....	112.1	116.4	129.4	108.0	118.1	116.4
1956.....	113.4	117.1	132.5	108.6	120.9	118.1
1957.....	118.6	119.6	134.9	108.5	126.1	121.9
1956						
January.....	111.5	116.5	131.3	108.6	119.0	116.8
February.....	109.9	116.7	131.5	108.6	119.3	116.4
March.....	109.1	116.8	131.6	108.7	119.9	116.4
April.....	109.7	116.6	131.9	108.7	120.1	116.6
May.....	109.3	116.5	132.1	108.8	120.5	116.6
June.....	112.5	116.7	132.6	108.6	120.6	117.8
July.....	114.4	116.7	132.7	108.6	121.1	118.5
August.....	115.9	116.8	133.0	108.4	121.3	119.1
September.....	115.5	117.1	133.1	108.4	121.4	119.0
October.....	117.4	117.7	133.3	108.5	121.6	119.8
November.....	117.9	118.1	133.4	108.4	122.8	120.3
December.....	117.5	118.6	133.5	108.6	122.9	120.4

5.—Annual Consumer Price Index 1950-57 and Monthly Indexes 1956 and 1957—concluded

(1949=100)

Year and Month	Food	Household Operation	Shelter	Clothing	Other Com- modities and Services	Composite Index
1957						
January.....	117.1	119.0	133.6	107.6	123.1	120.3
February.....	117.2	119.1	133.8	107.4	123.8	120.5
March.....	116.4	119.5	134.0	108.2	124.2	120.5
April.....	116.7	119.4	134.0	108.5	125.1	120.9
May.....	116.7	119.2	134.2	108.5	126.3	121.1
June.....	117.7	119.1	134.8	108.4	126.5	121.6
July.....	118.2	119.6	135.1	108.4	126.5	121.9
August.....	120.2	119.7	135.3	108.2	126.9	122.6
September.....	121.9	119.8	135.6	108.3	127.1	123.3
October.....	121.7	120.1	135.9	108.7	127.4	123.4
November.....	120.2	120.5	136.3	109.8	127.7	123.3
December.....	118.8	120.6	136.7	109.9	128.4	123.1

Table 6 provides single commodity price relatives on the base 1949 = 100 for a number of important foods entering into the food component of the consumer price index. It also provides a record of average prices based on the actual average level of prices prevailing in October 1952 and calculated for the other months on the basis of the price relatives.

6.—Urban Average and Relative Retail Prices of Staple Foods 1950-57 and by Month 1956 and 1957

(1949=100)

Year and Month	Beef, sirloin, per lb.		Pork, rib chops ¹ , per lb.		Lard, pure, per lb.		Eggs, "A", fresh, per doz.		Milk, fresh, per qt.	
	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative
	cts.		cts.		cts.		cts.		cts.	
1950.....	82.8	117.6	63.4	99.3	22.4	95.3	56.5	91.8	18.3	102.9
1951.....	101.1	143.5	73.3	114.8	28.4	121.1	71.6	116.5	19.6	110.0
1952.....	93.4	132.7	63.2	99.0	17.0	72.5	59.1	96.0	21.1	118.4
1953.....	79.6	113.0	72.5	113.7	20.8	88.4	67.6	109.9	21.1	118.5
1954.....	77.0	109.4	66.4 ¹	116.8 ¹	26.3	112.2	57.1	92.9	21.1	118.5
1955.....	80.0	113.6	61.5	108.2	22.4	95.2	61.5	99.9	21.1	118.5
1956.....	81.6	115.9	64.4	113.2	21.8	92.9	63.2	102.7	21.2	119.1
1957.....	84.3	119.7	74.6	131.1	25.6	109.0	56.0	91.0	22.5	126.2
1956										
January.....	79.7	113.2	57.4	100.9	21.6	92.0	65.2	106.0	21.1	118.5
February.....	78.4	111.3	55.8	98.1	21.2	90.3	52.8	85.8	21.1	118.5
March.....	76.0	107.9	56.0	98.4	20.7	88.2	55.6	90.4	21.1	118.5
April.....	74.3	105.5	55.4	97.5	20.7	88.2	58.9	95.7	21.1	118.5
May.....	76.0	107.9	57.0	100.2	21.0	89.5	60.5	98.3	21.1	118.5
June.....	80.6	114.5	64.4	113.3	21.3	90.7	61.8	100.4	21.1	118.5
July.....	84.3	119.7	68.3	120.1	21.2	90.3	67.2	109.3	21.1	118.5
August.....	87.0	123.6	70.0	123.1	21.2	90.3	72.0	117.1	21.1	118.5
September.....	89.6	127.3	70.9	124.7	21.8	92.9	71.5	116.3	21.1	118.5
October.....	87.3	124.0	72.2	126.9	22.6	96.3	70.6	114.7	21.1	118.5
November.....	83.8	119.0	71.5	125.7	23.8	101.4	67.7	110.0	21.7	121.9
December.....	82.1	116.6	73.4	129.0	24.5	104.4	54.7	88.9	21.8	122.5

¹ "Pork, fresh loins" prior to 1954."

6.—Urban Average and Relative Retail Prices of Staple Foods 1950-57 and by Month 1956 and 1957—concluded

(1949=100)

Year and Month	Beef, sirloin, per lb.		Pork, rib chops, per lb.		Lard, pure, per lb.		Eggs, "A", fresh, per doz.		Milk, fresh, per qt.	
	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative
1957	cts.		cts.		cts.		cts.		cts.	
January.....	82.0	116.5	72.0	126.6	25.3	107.8	52.4	85.2	22.1	124.2
February.....	81.9	116.3	72.2	126.9	25.8	109.9	50.2	81.6	22.1	124.2
March.....	81.1	115.2	72.0	126.6	26.0	110.8	50.6	82.3	22.1	124.2
April.....	82.1	116.6	70.5	124.0	26.0	110.8	50.1	81.5	22.1	124.2
May.....	84.8	120.4	70.0	123.1	26.0	110.8	50.3	81.8	22.1	124.2
June.....	86.9	123.4	77.3	136.0	25.5	108.6	50.1	81.5	22.4	125.8
July.....	87.4	124.1	79.7	140.1	25.3	107.8	53.4	86.8	22.4	125.8
August.....	87.7	124.6	82.9	145.7	25.5	108.6	63.4	103.0	22.4	125.8
September.....	87.2	123.9	83.1	146.2	25.5	108.6	65.7	106.8	22.5	126.4
October.....	84.8	120.4	74.0	130.1	25.5	108.6	64.5	104.8	23.1	129.8
November.....	81.8	116.2	69.9	122.9	25.4	108.2	64.2	104.3	23.1	129.8
December.....	83.5	118.6	71.0	124.8	25.2	107.4	57.0	92.7	23.2	130.3
Year and Month	Flour, per lb.		Tomatoes, canned, 2½'s, tin		Potatoes, 10 lb.		Sugar, granulated, per lb.		Bread, per lb.	
	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative
	cts.		cts.		cts.		cts.		cts.	
1950.....	7.3	104.8	17.7	88.0	33.2	95.4	10.6	114.4	10.6	104.6
1951.....	7.5	106.9	23.1	115.0	34.8	99.9	12.0	129.8	11.7	115.5
1952.....	7.4	105.9	28.8	143.6	68.6	196.9	11.2	121.0	12.0	119.3
1953.....	7.6	108.9	24.4	121.8	39.0	111.8	10.0	107.8	12.3	121.5
1954.....	7.7	110.2	21.5	107.4	37.5	107.6	9.4	101.8	12.8	126.8
1955.....	7.4	106.4	26.3	131.3	46.8	134.5	9.2	99.7	12.8	126.4
1956.....	7.6	108.8	27.3	136.1	49.7	142.6	9.3	100.4	13.3	131.6
1957.....	7.9	113.3	29.1	144.8	42.1	120.8	12.3	133.1	14.3	141.4
1956										
January.....	7.4	106.2	25.6	127.6	36.1	103.6	9.1	98.6	12.8	126.8
February.....	7.5	107.6	26.1	130.1	40.0	114.8	9.1	98.6	12.8	126.8
March.....	7.5	107.6	26.2	130.6	40.6	116.5	9.1	98.6	12.9	127.8
April.....	7.5	107.6	26.3	131.1	48.5	139.2	9.1	98.6	12.9	127.8
May.....	7.5	107.6	26.6	132.6	51.0	146.4	9.1	98.6	13.0	128.8
June.....	7.5	107.6	26.9	134.1	68.5	196.6	9.1	98.6	13.1	129.8
July.....	7.5	107.6	27.1	135.1	86.1	247.2	9.2	99.7	13.4	132.8
August.....	7.6	109.0	27.2	135.6	66.5	190.9	9.3	100.8	13.5	133.8
September.....	7.6	109.0	27.4	136.6	40.3	115.7	9.3	100.8	13.5	133.8
October.....	7.7	110.5	28.4	141.6	37.6	107.9	9.3	100.8	13.5	133.8
November.....	7.8	111.9	29.7	148.0	38.1	109.4	9.3	100.8	13.9	137.8
December.....	7.9	113.3	30.1	150.0	42.8	122.9	10.2	110.6	14.0	138.8
1957										
January.....	7.9	113.3	30.3	151.0	44.3	127.2	10.7	116.0	14.1	139.8
February.....	7.9	113.3	30.3	151.0	46.5	133.5	12.5	135.5	14.2	140.8
March.....	7.9	113.3	30.1	150.0	43.8	125.7	12.5	135.5	14.2	140.8
April.....	7.9	113.3	29.9	149.0	41.7	119.7	12.7	137.7	14.3	141.8
May.....	7.9	113.3	29.9	149.0	42.5	122.0	12.8	138.7	14.3	141.8
June.....	7.9	113.3	29.5	147.0	42.1	120.9	12.8	138.7	14.3	141.8
July.....	7.9	113.3	29.3	146.0	47.0	134.9	12.7	137.7	14.3	141.8
August.....	7.9	113.3	29.1	145.0	42.1	120.9	12.6	136.6	14.3	141.8
September.....	7.9	113.3	28.8	143.5	38.5	110.5	12.3	133.3	14.3	141.8
October.....	7.9	113.3	28.1	140.0	38.3	109.9	12.1	131.2	14.3	141.8
November.....	7.9	113.3	27.0	134.5	38.5	110.5	11.9	129.0	14.3	141.8
December.....	7.9	113.3	26.5	132.0	39.6	113.7	11.7	126.8	14.2	140.8

Consumer Price Indexes for Regional Cities.—Table 7 gives regional consumer price indexes for ten cities or city combinations. These indexes are not designed to show whether it costs more or less to live in one city than in another and should not be used for that purpose. Their function is to measure percentage changes in retail prices—over a certain time in each city or city combination—of a fixed basket of goods and services representing the level of consumption of a particular group of families.

7.—Consumer Price Indexes for Regional Cities 1950-57 and by Month 1956 and 1957

(1949=100)

Year and Month	St. John's, Nfld. ¹	Halifax, N.S.	Saint John, N.B.	Mont- real, Que.	Ottawa, Ont.	Tor- onto, Ont.	Winni- peg, Man.	Saska- toon- Regina, Sask.	Ed- monton- Calgary, Alta.	Van- couver, B.C.
1950.....	..	102.1	103.3	103.7	103.1	104.1	103.8	102.2	103.9	103.6
1951.....	..	112.1	114.1	116.1	115.3	115.4	114.6	111.7	113.5	114.3
1952.....	103.5	115.3	117.4	117.6	116.8	117.5	116.1	112.8	114.8	117.4
1953.....	102.2	113.2	115.3	116.3	115.0	116.8	114.4	113.1	114.0	116.1
1954.....	102.8	114.1	116.6	116.8	116.2	118.3	115.3	114.2	114.9	117.4
1955.....	104.2	114.8	117.7	116.9	117.2	118.8	115.9	114.6	114.6	117.9
1956.....	106.8	116.1	118.8	118.4	119.2	120.6	117.2	115.8	115.7	119.6
1957.....	109.4	119.8	122.6	121.8	123.2	125.2	120.0	119.1	118.8	122.6
1956										
January.....	104.7	114.5	117.4	117.4	117.5	118.8	116.8	115.2	114.8	120.0
February.....	104.9	114.1	117.1	117.0	117.3	118.3	116.5	114.7	114.1	118.5
March.....	105.0	114.3	117.4	116.7	117.3	118.2	116.8	114.7	114.3	118.6
April.....	105.9	114.8	117.6	116.7	117.7	118.7	116.5	114.9	114.6	118.6
May.....	106.6	114.7	117.5	116.6	117.7	119.1	116.1	114.6	114.3	117.7
June.....	107.6	115.6	118.2	118.1	118.8	120.4	116.6	115.2	114.9	118.4
July.....	108.1	116.0	118.7	119.1	119.4	121.5	117.6	115.6	115.7	119.3
August.....	110.2	117.6	120.3	118.9	120.4	122.0	117.0	116.2	116.1	119.6
September.....	107.3	117.2	119.6	118.8	120.0	121.7	117.5	116.8	116.8	120.5
October.....	106.9	117.7	120.0	119.9	120.9	122.5	118.1	117.2	117.5	121.2
November.....	107.0	118.0	120.4	120.9	121.5	123.1	118.4	117.2	117.7	121.5
December.....	107.5	118.5	121.1	120.7	121.6	123.1	118.4	117.1	117.4	121.7
1957										
January.....	107.7	118.6	121.2	120.6	121.4	123.1	118.8	117.1	117.2	122.1
February.....	108.5	118.8	122.1	120.5	121.6	123.4	118.7	117.6	117.4	122.5
March.....	108.8	118.7	122.1	120.3	121.6	123.5	118.4	117.8	117.4	122.4
April.....	108.7	119.4	122.1	120.5	122.4	124.2	119.2	117.9	117.7	122.2
May.....	109.3	119.1	121.9	120.7	122.8	125.0	119.2	117.9	118.1	122.0
June.....	109.5	119.1	122.0	121.5	123.2	125.2	119.6	118.8	118.4	121.5
July.....	109.6	119.3	122.4	122.0	123.4	125.5	120.0	119.3	119.1	121.7
August.....	110.5	120.6	123.3	122.2	124.0	125.9	120.7	120.2	119.8	122.5
September.....	110.2	120.9	123.5	122.8	124.7	126.8	121.2	121.1	120.5	123.5
October.....	109.9	120.6	123.3	123.3	125.0	126.7	120.9	121.0	120.6	123.8
November.....	109.8	121.2	123.4	123.8	124.4	126.4	121.2	120.2	119.9	123.6
December.....	109.8	121.1	123.4	123.4	124.2	126.1	121.6	120.1	120.0	123.9

¹ Explanation of methods used in compiling St. John's, Nfld., index (June 1951=100) is given in DBS Reference Paper No. 28.

World Retail Price Indexes.—In order to place changes in Canadian retail prices in perspective with those occurring elsewhere, Table 8 provides retail price indexes for selected countries for 1955 and 1956. These indexes measure price change only within each country and should not be used to compare actual levels of living costs from country to country.

8.—Index Numbers of Retail Prices in Canada and other Countries 1955 and 1956(BASE: 1953=100. SOURCE: *United Nations Monthly Bulletin of Statistics*, November 1957.)

Country	1955	1956	Country	1955	1956
Belgium.....	101	104	Iran.....	122	130
Brazil.....	142	173	Israel.....	119	127
Canada.....	101	102	Korea, South.....	229	285
Chile.....	302	471	Netherlands.....	106	108
Denmark.....	106	111	New Zealand.....	107	111
Dominican Republic.....	98	99	Norway.....	105	109
Egypt.....	96	98	Sweden.....	104	109
France (Paris).....	101	103	Switzerland.....	102	103
Germany (Western).....	102	105	Turkey.....	119	136
Greece.....	122	126	United Kingdom.....	106	112
India.....	90	99	United States.....	100	102

Section 3.—Index Numbers of Security Prices

Investors price indexes for common stocks are calculated on the 1935-39 base and published weekly and monthly for a sample of issues, broadly classified under the headings: industrials, public utilities and banks. Within the first category the sample is further classified by industries for which indexes are available. Monthly indexes of mining stocks including both golds and base metals are calculated and published separately, as are indexes of preferred stocks.

For purposes of index calculation,[†] Thursday closing prices are used for the issues of companies listed on either or both the Montreal and Toronto stock exchanges. Weights are applied to each issue on the basis of the number of shares currently outstanding. The list of stocks included in the various security series, currently totalling 95 for the investors index and 27 for mining stocks index, are revised annually so that issues which have become important in stock market activity may be included and those of declining interest removed. Provision is also made for stock splits, mergers and the exercise of 'rights'. The indexes are designed to reflect weekly and monthly changes of interest to the investor, rather than day-to-day changes of more speculative interest. For that reason the historical record of indexes dating back to January 1914 on a monthly basis* is of significance in any analysis of the degree of fluctuation in stock prices through time.

Investors Index.—A continuation of the strong upward trend inaugurated with the inception of the bull market in December 1953 culminated in an all-time peak in the investors total index of 291.8 in August 1956; the September 1929 peak was 197.8. Subsequent sharp declines, which brought the level to 262.3 by November 1956 were reversed in December and by May 1957 losses had been largely recouped. Prices broke sharply in mid-summer, however, and by December the composite index had reacted to 216.2 for a net loss of 19.3 p.c. over the year. Among major groups, industrials moved to a postwar peak of 308.9 by August 1956, but by December 1957 stood at 224.0. Utilities reached a peak of 216.8 in June 1957 and then dropped to 173.9. Banks, pursuing a similar course to industrials, moved to 295.4 in August 1956 and back to 234.9 by December 1957. Sub-groups registering greatest losses in 1957 were industrial mines, transportation, machinery and equipment and oils. One group, foods and allied products, moved higher.

* Available on request from Prices Division, Dominion Bureau of Statistics.

—Investors Index Numbers of Common Stocks by Month 1956 and 1957

(1935-39 = 100)

Year and Month	Industrials										Public Utilities				Banks, Total	In- vestors Com- posite Index
	Ma- chinery and Equip- ment	Pulp and Paper	Milling	Oils	Tex- tiles and Cloth- ing	Food and 'Allied Prod- ucts	Bever- ages	Build- ing Ma- terials	Indus- trial Mines	Indus- tri- als, Total	Trans- por- tation	Tele- phone	Power and Trac- tion	Utili- ties, Total		
1956																
January.....	735.6	1,070.0	209.4	175.5	179.9	196.8	583.7	458.4	205.3	257.0	385.4	129.4	192.6	206.5	260.0	248.5
February.....	728.0	1,077.3	199.2	182.6	174.0	197.3	579.0	464.0	200.6	258.1	373.3	129.5	190.6	204.1	264.2	249.2
March.....	804.6	1,153.0	199.6	205.2	178.8	199.7	590.4	503.6	217.0	280.3	399.3	131.0	194.3	210.2	276.8	267.9
April.....	826.4	1,223.9	187.4	210.0	170.9	191.8	577.5	519.5	222.1	286.2	394.8	127.7	200.2	209.3	288.7	273.0
May.....	818.1	1,192.5	179.8	211.7	160.2	180.8	551.7	488.5	218.0	282.9	370.2	125.2	201.0	204.2	271.7	268.5
June.....	843.6	1,146.0	167.3	219.4	158.8	181.5	549.1	466.3	217.2	283.0	356.8	119.2	206.0	199.8	260.7	267.0
July.....	913.7	1,185.8	173.9	234.9	159.5	190.8	565.4	504.2	223.5	299.0	361.7	122.2	222.4	207.9	287.4	282.4
August.....	915.4	1,175.3	175.2	250.1	158.3	195.5	558.6	514.2	237.3	308.9	389.1	124.9	228.0	215.7	295.4	291.8
September.....	855.3	1,077.2	166.0	243.7	153.4	183.5	530.9	485.0	228.2	294.4	380.0	121.1	220.1	209.2	283.8	278.9
October.....	815.7	1,024.9	160.2	236.2	155.3	175.0	518.7	469.8	223.4	284.8	370.9	119.5	215.0	205.1	275.3	270.3
November.....	762.8	994.2	151.2	239.2	154.8	175.2	487.1	452.0	211.9	276.0	351.5	117.8	212.5	200.3	268.8	262.3
December.....	776.8	998.9	143.6	244.8	152.4	176.5	493.0	459.6	219.0	281.7	367.1	118.3	214.4	203.6	276.2	267.8
1957																
January.....	763.0	1,005.3	147.8	251.6	163.7	181.2	506.3	463.2	228.4	287.3	363.5	118.4	227.9	207.5	289.9	273.7
February.....	756.6	946.4	141.4	244.8	154.7	181.4	488.8	433.4	211.8	276.0	343.2	116.5	228.9	203.6	271.3	263.2
March.....	790.4	966.4	134.8	246.2	153.5	182.8	485.9	438.0	218.2	281.0	364.2	115.7	239.0	209.2	266.2	262.5
April.....	825.6	997.0	138.2	262.9	153.4	197.6	490.9	453.5	225.5	294.2	385.8	114.0	243.6	212.5	277.5	278.8
May.....	868.0	996.4	155.0	278.8	157.2	204.7	516.0	470.9	223.9	304.8	397.2	113.1	251.9	216.1	279.0	287.6
June.....	882.7	998.9	141.9	275.6	161.8	208.2	514.6	482.4	217.6	303.5	401.0	107.6	264.6	216.8	281.8	286.9
July.....	932.2	991.9	137.5	274.2	162.5	204.5	506.2	483.4	204.3	301.6	398.0	105.2	262.0	213.8	277.8	284.7
August.....	803.9	915.9	135.8	245.9	160.3	195.8	485.9	458.3	182.4	272.4	364.5	104.1	237.8	200.6	260.2	259.0
September.....	728.5	861.3	126.4	225.5	155.1	189.6	466.9	424.0	172.1	252.8	343.0	103.4	219.4	191.2	252.2	249.6
October.....	641.7	813.4	118.7	185.7	145.8	183.8	459.7	384.6	156.7	228.0	306.9	100.5	195.9	176.7	234.9	219.6
November.....	600.3	792.7	122.4	185.6	144.0	188.8	475.1	377.6	159.3	226.2	284.3	102.0	201.3	176.2	240.5	218.6
December.....	587.9	808.1	120.8	194.9	151.4	193.7	482.6	373.4	151.0	224.0	272.5	102.4	198.4	173.9	234.9	216.2

Mining Stocks.—Mining stocks, paralleling industrials and utilities, recorded major declines during 1957 as the composite index fell 30.9 p.c. from 129.4 in December 1956 to 89.4 in December 1957. A substantial change in base metal shares, where a drop of 41.4 p.c. from 267.8 to 156.8 was recorded, was chiefly responsible. Golds declined a relatively modest 12.9 p.c. from 68.9 to 60.0.

10.—Weighted Index Numbers of Prices of Mining Stocks by Month 1951-57

(1935-39=100)

Year and Month	Gold	Base Metals	Total	Year and Month	Gold	Base Metals	Total
1951				1956			
January.....	60.3	131.2	81.9	January.....	75.8	238.1	125.2
February.....	62.1	132.0	83.4	February.....	76.7	235.8	125.1
March.....	61.5	136.5	84.3	March.....	79.4	260.2	134.4
April.....	64.8	145.5	89.3	April.....	78.8	269.7	136.8
May.....	64.4	146.5	89.4	May.....	78.8	268.5	136.5
June.....	63.9	149.7	90.0	June.....	76.7	273.1	136.4
July.....	64.9	154.0	92.0	July.....	79.5	291.5	144.0
August.....	67.8	159.2	95.6	August.....	79.5	301.9	147.1
September.....	68.3	160.8	96.4	September.....	74.1	282.2	137.4
October.....	66.2	161.0	95.0	October.....	72.5	273.3	133.5
November.....	65.6	168.7	97.0	November.....	68.6	262.2	127.4
December.....	67.6	177.2	100.9	December.....	68.9	267.8	129.4
1955				1957			
January.....	68.3	181.3	102.7	January.....	70.6	265.7	129.9
February.....	69.3	191.3	106.4	February.....	69.3	243.2	122.2
March.....	69.0	189.6	105.7	March.....	68.1	249.6	123.3
April.....	71.1	199.8	110.2	April.....	72.4	255.4	128.0
May.....	72.8	209.0	114.2	May.....	76.2	234.2	124.2
June.....	75.9	226.0	121.5	June.....	80.6	227.7	125.4
July.....	75.0	241.8	125.7	July.....	79.3	222.2	122.8
August.....	76.3	250.0	129.1	August.....	73.2	192.6	109.5
September.....	75.3	252.0	129.0	September.....	71.4	180.7	104.6
October.....	71.0	224.2	117.6	October.....	63.4	167.2	95.0
November.....	71.2	230.2	119.6	November.....	61.2	167.0	93.4
December.....	72.6	233.0	121.4	December.....	60.0	156.8	89.4

Preferred Stocks.—Further weakness in 1957 lowered the index for a representative list of preferred stocks from 154.4 in December 1956 to 151.1 in December 1957.

11.—Index Numbers of Preferred Stocks by Month 1948-57

(1935-39=100)

NOTE.—Figures for 1927-45 are given in the 1948-49 Year Book, p. 958, and for 1946 and 1947 in the 1956 edition, p. 1045.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1948.....	144.5	141.0	138.9	144.2	147.0	148.2	147.5	146.4	144.8	143.7	144.6	144.6
1949.....	144.7	144.0	142.8	140.9	139.9	136.3	138.6	140.4	141.8	145.8	150.0	150.7
1950.....	152.4	153.0	153.7	154.4	157.3	158.2	154.6	155.6	158.2	161.1	161.1	160.2
1951.....	166.0	169.3	166.0	165.2	164.3	162.2	163.1	165.2	166.4	164.2	162.8	159.5
1952.....	161.4	160.6	159.5	157.2	157.2	157.7	159.8	163.6	162.4	161.2	160.3	160.7
1953.....	161.0	161.6	163.6	161.6	162.9	163.0	163.8	164.3	162.0	161.0	161.6	161.7
1954.....	162.6	163.6	165.4	168.0	169.7	170.7	171.3	173.0	173.4	174.1	175.4	175.4
1955.....	175.6	176.0	176.2	175.4	176.1	177.9	179.5	179.9	179.0	179.2	176.6	173.9
1956.....	175.5	175.3	173.6	171.1	167.7	166.2	167.5	166.1	161.7	158.7	157.0	154.4
1957.....	155.9	156.4	154.8	153.4	153.1	150.8	150.0	149.4	147.3	146.1	147.6	151.1

CHAPTER XXIV.—PUBLIC FINANCE*

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Section 1.—Combined Statistics of Public Finance for All Governments

Combined statistics of public finance for all governments in Canada—federal, provincial and municipal—are presented in this Section. Additional information is provided for each level of government in Sections 2, 3 and 4.

Combined Revenue and Expenditure.—Tables 1 and 2 give details of the federal, provincial and municipal net combined revenue by sources and net combined current and capital expenditure by services, respectively, for 1954 and 1955. This net basis has been prepared by deducting from revenue, and the appropriate expenditure, certain specified amounts such as grants-in-aid and shared-cost contributions from other governments, institutional revenue, certain other sales of commodities and services, and interest, premium, discount and exchange revenue. Amounts provided for debt retirement are excluded to avoid duplication since all expenditure resulting from capital borrowings is included.

Inter-governmental transfers such as subsidy payments by the Federal Government to the provincial governments are unconditional grants and therefore cannot be offset against any specific expenditure. These are set out separately in Tables 1 and 2 in order to prevent duplication and to provide additive totals. Because of the differing accounting practices of governments and variations in fiscal year-ends, discrepancies appear between the amounts recorded as inter-governmental transfers in the two tables.

Tables 3 and 4 show combined revenue of all governments and combined expenditure of all governments, respectively, for the years 1951-55, both exclusive of inter-governmental transfers. Figures for Yukon Territory and the Northwest Territories are not included.

*Revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

1.—Combined Revenue of All Governments 1954 and 1955

NOTE.—Figures are for the fiscal years ended nearest Dec. 31.

Item	1954				1955			
	Federal	Pro- vincial	Muni- cipal	Total	Federal	Pro- vincial	Muni- cipal	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Taxes—								
Corporation.....	1,035,117	65,293	—	1,100,410	1,043,219	73,551	—	1,116,770
Customs duties and import.....	398,177	—	—	398,177	482,520	—	—	482,520
Gasoline.....	—	235,757	—	235,757	—	264,201	—	264,201
General sales.....	572,215	128,589	37,293	738,097	641,510	149,444	43,299	834,253
Income—persons.....	1,183,448	25,225	—	1,208,673	1,185,600	30,208	—	1,215,808
Liquor.....	128,725	158,200	—	286,925	143,996	171,695	—	315,691
Succession duties.....	44,768	40,664	—	85,432	66,607	72,046	—	138,653
Real and personal property.....	—	6,020	627,325 ²	633,345	—	6,147	683,254 ²	689,401
Tobacco.....	213,740	13,667	—	227,407	234,322	15,022	—	249,344
Withholding.....	61,264	—	—	61,264	66,176	—	—	66,176
Other.....	135,984	45,249	80,658	261,891	131,772	47,416	90,108	269,296
Totals, Taxes.....	3,773,438	718,664	745,276	5,237,378	3,995,722	829,730	816,661	5,642,113
Licences, Permits and Fees—								
Motor vehicle.....	341	94,727	—	95,068	382	114,629	—	115,011
Other.....	6,781	3	21,639	28,420	6,589	3	23,264	29,853
Totals, Licences, Permits and Fees.....	7,122	94,727	21,639	123,488	6,971	114,629	23,264	144,864
Public domain.....	2,416	193,252	—	195,668	2,401	264,518	—	266,919
Public utility contributions to municipalities.....	—	—	37,880	37,880	—	—	40,276	40,276
Post Office (net).....	7,732	—	—	7,732	10,253	—	—	10,253
Bank of Canada profits.....	41,412	—	—	41,412	38,341	—	—	38,341
Bullion and coinage.....	1,836	—	—	1,836	3,247	—	—	3,247
Miscellaneous revenue.....	43,738	48,853	62,911	155,502	44,623	53,909	68,991	167,523
Totals, Revenue (excluding Inter-governmental Transfers).....	3,877,694	1,055,496	867,706	5,800,896	4,101,558	1,262,786	949,192	6,313,536
Inter-governmental Transfers—								
Federal subsidies to provinces...	—	20,293	—	20,293	—	20,210	—	20,210
Subsidies to municipalities.....	—	—	40,548 ⁴	40,548	—	—	42,084 ⁴	42,084
Transitional grant to Newfoundland.....	—	3,950	—	3,950	—	3,100	—	3,100
Dominion - Provincial Taxation Agreements.....	—	327,080	—	327,080	—	319,930	—	319,930
Share of income tax on electric power utilities.....	—	7,294	—	7,294	—	7,948	—	7,948
Nova Scotia highway tax.....	—	240	—	240	—	240	—	240
Interest on Common School Fund	—	134	—	134	—	134	—	134
Totals, Inter-governmental Transfers.....	—	358,991	40,548	399,539	—	351,562	42,084	393,646
Grand Totals.....	3,877,694	1,414,487	908,254	6,200,435	4,101,558	1,614,348	991,276	6,707,182

¹ Includes provincial income from liquor control.² Excludes personal property which is not separable

from other taxes.

³ Included in miscellaneous revenue.⁴ Includes federal grants to municipalities

in lieu of taxes on federal properties which are not segregated from provincial subsidies to municipalities.

2.—Combined Expenditure of All Governments 1954 and 1955

NOTE.—Figures are for the fiscal years ended nearest Dec. 31.

Item	1954				1955			
	Federal	Pro- vincial	Muni- cipal	Total	Federal	Pro- vincial	Muni- cipal	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Public Welfare—								
Health and hospital care.....	36,786	239,017	57,896	333,699	38,973	252,386	54,788	346,147
Labour and unemployment insur- ance.....	62,137	6,190	—	68,327	62,571	6,640	—	69,211
Relief.....	—	15,245	7,188	22,433	—	15,309	8,163	23,472
Old age pensions.....	66,805 ¹	32,813	—	99,618	84,263 ¹	33,588	—	117,851
Family allowances.....	368,986	—	—	368,986	385,068	—	—	385,068
Other.....	27,608	65,652	114,155	207,415	34,439	73,868	117,444	225,751
Totals, Public Welfare.....	562,322	358,917	179,239	1,100,478	605,314	381,791	180,395	1,167,500
Education.....	22,397	269,575	403,749	695,721	24,961	329,921	434,044	788,926
Transportation.....	237,070	372,144	168,040	777,254	214,270	458,082	184,123	856,475
Agriculture.....	85,910	33,847	—	119,757	92,614	35,661	—	128,275
Public domain.....	71,531	74,708	—	146,239	69,900	86,886	—	156,786
National defence.....	1,647,594	—	—	1,647,594	1,700,745	—	—	1,700,745
Veterans pensions and aftercare...	221,828	—	—	221,828	230,617	—	—	230,617
Expansion of industry.....	2	—	—	—	2	—	—	—
Debt charges, net (excluding retire- ments).....	425,690	53,033	55,285	534,008	413,740	52,076	62,028	527,844
Other expenditure.....	387,326	170,971	317,831	876,128	421,046	191,480	296,916	909,442
Totals, Expenditure (exclud- ing Inter-governmental Transfers).....	3,661,668	1,333,195	1,124,144	6,119,007	3,773,207	1,535,897	1,157,506	6,466,610
Inter-governmental Transfers—								
Federal subsidies to provinces...	20,354	—	—	20,354	20,272	—	—	20,272
Transitional grant to Newfound- land.....	3,950	—	—	3,950	3,100	—	—	3,100
Provincial subsidies to munici- palities.....	—	36,487	—	36,487	—	36,023	—	36,023
Dominion-Provincial Taxation Agreements.....	327,445	—	—	327,445	319,624	—	—	319,624
Share of income tax on electric power utilities.....	7,294	—	—	7,294	7,948	—	—	7,948
Nova Scotia highway tax.....	—	—	246	246	—	—	246	246
Interest on Common School Fund	134	—	—	134	134	—	—	134
Grants to municipalities in lieu of taxes on federal properties.....	3,358	—	—	3,358	7,190	—	—	7,190
Totals, Inter-governmental Transfers.....	362,535	36,487	246	399,268	358,268	36,023	246	394,537
Grand Totals.....	4,024,203	1,369,682	1,124,390	6,518,275	4,131,475	1,571,920	1,157,752	6,861,147

¹ Includes payments to Old Age Security Fund of \$45,838,000 in 1954 and \$63,252,000 in 1955.² Refunds

of expenditure exceeded expenditure; excess included in Table 1 under "Miscellaneous revenue".

3.—Combined Revenue of All Governments exclusive of Inter-governmental Transfers 1951-55

NOTE.—Figures are for the fiscal years ended nearest Dec. 31.

Item	1951	1952	1953	1954	1955
	\$'000	\$'000	\$'000	\$'000	\$'000
Taxes—					
Corporation.....	1,332,410	1,376,690	1,317,849	1,100,410	1,116,770
Customs import duties.....	347,208	390,121	407,998	398,177	482,520
Gasoline.....	178,461	196,907	219,762	235,757	264,201
General sales.....	691,953	694,485	727,821	738,097	834,253
Income—persons.....	976,953	1,180,039	1,187,669	1,208,673	1,215,808
Liquor ¹	264,102	284,312	289,390	286,925	315,691
Succession duties.....	72,398	70,797	70,272	85,432	138,653
Real and personal property ²	475,040	542,751	586,689	633,345	689,401
Tobacco.....	216,774	230,480	223,659	227,407	249,344
Withholding.....	55,017	53,674	53,761	61,264	66,176
Other.....	319,929	299,247	314,273	261,891	269,296
Totals, Taxes.....	4,930,245	5,319,503	5,399,143	5,237,378	5,642,113
Licences, Permits and Fees—					
Motor vehicle.....	72,970	81,632	88,993	95,068	115,011
Other.....	43,206	24,781	27,185	28,420	29,853
Totals, Licences, Permits and Fees.....	116,176	106,413	116,178	123,488	144,864
Public domain.....	134,343	164,673	204,328	195,668	266,919
Public utility contributions to municipalities.....	29,323	33,093	36,009	37,880	40,276
Post Office (net).....	6,695	6,501	³	7,732	10,253
Bank of Canada profits.....	24,018	28,792	43,868	41,412	38,341
Bullion and coinage.....	4,838	4,386	4,241	1,836	3,247
Miscellaneous revenue.....	89,929	122,480	135,691	155,502	167,523
Totals, Revenue (excluding Inter-governmental Transfers).....	5,335,567	5,785,841	5,939,458	5,800,896	6,313,536

¹ Includes provincial income from liquor control. ² Excludes personal property for municipal governments which is inseparable from other taxes.

³ Expenditure exceeds revenue.

4.—Combined Expenditure of All Governments exclusive of Inter-governmental Transfers 1951-55

NOTE.—Figures are for the fiscal years ended nearest Dec. 31.

Item	1951	1952	1953	1954	1955
	\$'000	\$'000	\$'000	\$'000	\$'000
Public Welfare—					
Health and hospital care.....	240,765	274,226	297,848	333,699	346,147
Labour and unemployment insurance.....	61,343	63,735	66,063	68,327	69,211
Relief.....	19,651	17,139	18,346	22,433	23,472
Old age pensions.....	168,106	46,679	49,120	99,618	117,851
Family allowances.....	322,317	336,496	352,514	368,986	385,068
Other.....	137,863	156,878	182,513	207,415	225,751
Totals, Public Welfare.....	950,045	895,153	966,404	1,100,478	1,167,500
Education.....	483,669	570,212	615,863	695,721	788,926
Transportation.....	572,890	669,071	713,181	777,254	856,475
Agriculture.....	96,243	136,715	145,018	119,757	128,275
Public domain.....	112,086	123,730	137,361	146,239	156,786
National defence.....	1,400,709	1,864,533	1,792,043	1,647,594	1,700,745
Veterans pensions and aftercare.....	198,230	221,966	220,344	221,828	230,617
Debt charges, net (excluding retirements).....	518,845	482,734	498,625	534,008	527,844
Other expenditure.....	763,396	789,469	818,986	876,128	909,492
Totals, Expenditure (excluding Inter-governmental Transfers).....	5,096,113	5,753,583	5,907,825	6,119,007	6,466,610

5.—Consolidated Debt of All Governments 1954 and 1955

Note.—Certain items in this table are not strictly comparable with corresponding items in similar tables of previous Year Books: see text p. 1091.

Item	1954					1955						
	Federal	Pro- vincial	Muni- cipal	Total	Deduct Inter- gov- ern- mental Debt	Consoli- dated Gov- ern- mental Debt	Federal	Pro- vincial	Muni- cipal	Total	Deduct Inter- gov- ern- mental Debt	Consoli- dated Gov- ern- mental Debt
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Direct Debt—												
Funded debt.....	12,906,442	2,628,902	2,112,702	17,648,046	161,179	17,486,867	13,307,570	2,714,427	2,408,427	18,430,424	188,887	18,241,537
Less Sinking funds.....	190,890	428,734	88,955	708,579	—	708,579	210,847	470,456	92,920	774,223	—	774,223
Net funded debt.....	12,715,552	2,200,168	2,023,747	16,939,467	161,179	16,778,288	13,096,723	2,243,971	2,315,507	17,656,201	188,887	17,467,314
Treasury bills ¹	1,500,000 ²	4,850	—	1,504,850	—	1,504,850	2,100,000 ³	14,446	—	2,114,446	—	2,114,446
Savings deposits.....	36,781	2,205	—	38,986	—	38,986	36,164	2,068	—	38,232	—	38,232
Temporary loans.....	—	30,236	115,590	145,826	—	145,826	—	17,378	127,731	145,309	—	145,309
Other direct liabilities.....	3,086,529	218,691	200,326	3,505,546	35,391	3,470,155	3,323,427	240,666	203,935	3,768,028	38,246	3,729,782
Totals, Direct Debt (less Sinking Funds).....	17,428,862	2,456,150	2,339,663	22,224,675	196,570	22,028,105	18,556,314	2,518,729	2,647,173	23,722,216	227,133	23,495,083
Indirect Debt—												
Guaranteed bonds.....	908,451	1,458,665	16,091	2,383,207	28,617	2,354,590	792,553	1,589,522	14,969	2,397,044	81,305	2,315,739
Less Sinking funds.....	—	11,211	646	11,857	1,658	10,199	—	16,235	378	16,613	1,730	14,883
Net guaranteed bonds.....	908,451 ⁴	1,447,454	15,445	2,371,350	26,959	2,344,391	792,553 ⁵	1,573,287	14,591	2,380,431	79,575	2,300,856
Loans under the Municipal Improve- ment Assistance Act 1938.....	—	3,127	—	3,127	3,127	—	—	2,867	—	2,867	2,867	—
Guaranteed bank loans and other indirect liabilities.....	353,080 ⁶	60,845	795	414,720	2,549	412,171	711,185 ⁷	78,176	332	789,698	1,927	787,766
Totals, Indirect Debt (less Sinking Funds).....	1,261,531	1,511,426	16,240	2,789,197	32,635	2,756,562	1,503,738	1,654,330	14,923	3,172,991	84,369	3,088,622
Grand Totals.....	18,690,393	3,967,576	2,355,903	25,013,872	229,205	24,784,667	20,060,052	4,173,059	2,662,096	26,895,207	311,502	26,583,705

¹ Includes treasury bills having a term of two or more years.

² Includes treasury bills having a term of less than two years.

³ Excludes unguaranteed issues of the Canadian National Railways and related sinking funds.

⁴ Excludes unguaranteed issues of the Canadian National Railways and related sinking funds.

⁵ Excludes contingent liability in respect of Federal Government guarantee of deposits maintained by chartered banks in the Bank of Canada, miscellaneous guarantees the amount of which were not finally determined or were indeterminate at the close of the fiscal year, and contingent liabilities of the Canadian National Railways.

Consolidated Debt.—The term “Consolidated” has been substituted for “Combined”, where applicable, because it is considered more appropriate in view of the elimination of inter-governmental debt. Table 5 gives details of combined debt of all governments for 1954 and 1955 with the aggregate debt of the federal, provincial and municipal governments; the inter-governmental debt is deducted to arrive at a consolidated government figure. This table was prepared according to the classifications and concepts that have been the subject of discussions and agreements at federal-provincial conferences on provincial and municipal finance statistics, so that some items are not strictly comparable with corresponding items given in previous editions of the Canada Year Book.

Section 2.—Federal Public Finance

A sketch of public finance from the French régime to the outbreak of World War I appears in the 1941 Year Book, pp. 742-743. Detailed sketches *re* tax changes from 1914 to 1938 will be found in issues of the Year Book beginning with the 1926 edition. An outline of the financing of Canada's war effort, including the more important changes in taxation during the war years from 1939 to 1945, is given in the 1945 Year Book, pp. 918-923. The postwar financial policy of the Government of Canada is outlined in the 1954 Year Book at pp. 1061-1064 and tax changes proposed in the 1954-55 and 1955-56 Budgets in the 1955 and 1956 editions, pp. 1130 and 1051, respectively.

The 1956-57 Budget.—The Budget for 1956-57 was presented to Parliament on Mar. 20, 1956. It made no significant changes in tax rates. A special excise tax of 20 p.c. on advertising revenues of Canadian editions of foreign magazines was introduced to take effect Jan. 1, 1957.

The 1957-58 Budget.—The Budget for 1957-58 was brought down on Mar. 14, 1957. It did not change rates of personal income tax, but provided for extension of the privilege of tax postponement on earned income to persons additional to those in employer-employee pension plans through deduction, up to certain limits, of the purchase price of approved annuities. Provision was made for any taxpayer to claim a “standard deduction” of one hundred dollars per year without submission of receipts for charitable donations, medical bills, union dues and professional membership dues, and there were other small changes in exemption provisions. A number of commodities were relieved of sales tax, including tea and coffee, and the last three of special excise taxes imposed at the time of the Korean war were removed from candy, soft drinks and motorcycles. Some small changes in excise tax were effected.

On Dec. 6, 1957, the Minister of Finance announced in Parliament that legislation would be introduced to implement changes in taxation, including: the raising from \$20,000 to \$25,000 the profit figure below which the corporation income tax rate of 20 p.c. would apply; the increase of personal income tax exemptions from \$150 to \$250 for children of family allowance age, and from \$400 to \$500 for others, with reduction of the rate of personal income tax in the two lowest taxable brackets to 11 p.c. and 14 p.c. from 13 p.c. and 15 p.c.; reduction of the excise tax on automobiles from 10 p.c. to 7.5 p.c.

Subsection 1.—Balance Sheets of the Federal Government

Table 6 shows the balance sheets of the Federal Government as at Mar. 31, 1955-57. The figures of this table are on a basis not strictly comparable to those in previous Year Books.

6.—Balance Sheet of the Federal Government as at Mar. 31, 1955-57

Item	1955	1956	1957
	\$	\$	\$
Assets			
Current Assets—			
Cash in current and special deposits.....	231,045,677	570,819,850	472,199,177
Cash in hands of collectors and in transit.....	126,187,337	151,925,147	132,015,372
Departmental Working Capital Advances and Revolving Funds—			
Defence Production Revolving Fund.....	72,756,158	58,417,158	56,351,866
Other.....	72,911,128	76,625,372	67,587,377
Other Current Assets—			
Moneys received after Mar. 31 but applicable to the current year.....	17,046,026	11,676,345	14,649,402
Securities investment account.....	45,636,632	721,577,658	204,253,602
	565,582,958	1,591,041,530	947,056,796
Advances to the Exchange Fund Account.....	1,980,000,000	1,950,000,000	2,021,000,000
Sinking fund and other investments held for retirement of unmatured debt.....	190,890,503	210,846,784	210,805,017
Loans to and Investments in Crown Corporations—			
Canadian National Railways.....	934,004,940	1,104,676,348	1,276,760,593
Central Mortgage and Housing Corporation—capital and loans.....	575,010,188	564,551,193	560,508,002
National Harbours Board.....	107,210,354	107,088,959	114,267,198
Miscellaneous.....	177,253,319	231,193,431	298,969,889
	1,793,478,801	2,007,509,931	2,250,505,682
Loans to National Governments.....	1,620,825,611	1,549,804,685	1,478,559,528
Other Loans and Investments—			
Canada's Subscription to Capital of—			
International Monetary Fund.....	293,394,548	299,757,439	290,954,972
International Bank for Reconstruction and Development.....	70,864,349	70,864,349	70,864,349
Working capital advances to international organizations....	1,667,856	1,652,711	2,479,700
Provincial governments.....	76,693,226	73,067,946	69,645,873
Soldier Settlement and Veterans' Land Act loans (<i>less</i> reserve for conditional benefits).....	162,570,578	161,051,804	157,193,063
Miscellaneous.....	25,879,238	40,791,450	63,950,589
	631,069,795	647,185,699	655,088,546
Province Debt Accounts.....	2,296,152	—	100,124
Deferred Charges—			
Unamortized loan flotation costs.....	67,549,458	56,874,003	63,920,033
Unamortized portion of actuarial deficiency in the super-annuation account.....	189,000,000	189,000,000	139,000,000
	256,549,458	245,874,003	202,920,033
Suspense Accounts—			
Temporary loan to Old Age Security Fund.....	63,251,655	50,012,857	1,506,233
Miscellaneous.....	494,732	2,465	7,926,134
	63,746,387	50,015,322	9,432,367
Capital Assets.....	1	1	1
Inactive Loans and Investments.....	80,355,709	87,969,925	89,455,528
Totals, Assets.....	7,184,795,375	8,340,247,880	7,864,923,622
<i>Less</i> reserve for losses on realization of assets.....	496,384,065	496,384,065	546,384,065
Net Assets.....	6,688,411,310	7,843,863,815	7,318,539,557
Net Debt.....	11,263,080,154	11,280,368,964	11,007,651,158
	17,951,491,464	19,124,232,779	18,326,190,715

6.—Balance Sheet of the Federal Government as at Mar. 31, 1955-57—concluded

Item	1955	1956	1957
	\$	\$	\$
Liabilities			
Current and Demand Liabilities—			
Outstanding treasury cheques.....	265,559,858	293,243,156	314,019,206
Accounts payable.....	201,906,394	202,971,491	232,859,952
Non-interest bearing notes payable on demand.....	224,591,500	223,828,500	211,828,500
Matured debt outstanding.....	53,715,869	31,876,201	35,989,816
Interest due and outstanding.....	54,233,575	58,231,988	59,158,908
Interest accrued.....	120,180,162	129,765,259	119,958,733
Other current liabilities.....	23,767,571	29,547,890	29,093,529
	943,954,929	969,464,485	1,002,908,644
Deposit and Trust Accounts.....	154,007,374	166,342,688	167,575,354
Annuity, Insurance and Pension Accounts—			
Government annuities.....	864,543,038	930,221,101	989,285,939
Permanent services pension account.....	277,638,893	346,373,948	426,305,539
Superannuation account.....	733,568,390	804,236,283	918,943,987
Miscellaneous.....	101,682,401	104,784,090	92,623,457
	1,977,432,722	2,185,615,422	2,427,158,922
Undisbursed Balances of Appropriations to Special Accounts—			
National Defence equipment account (Sect. 3, Defence Appropriation Act, 1950).....	273,875,509	281,933,743	236,075,184
Miscellaneous.....	58,371,066	61,739,713	76,481,065
	332,246,575	343,673,456	312,556,249
Suspense Accounts.....	35,488,042	51,566,525	47,576,093
Province Debt Accounts.....	11,919,969	—	—
Unmatured Debt—			
Bonds—			
Payable in Canada.....	12,506,630,400	12,955,758,750	12,391,604,000
Payable in London.....	51,811,453	51,811,453	51,811,453
Payable in New York.....	348,000,000	300,000,000	300,000,000
Treasury Bills and Notes—			
Payable in Canada.....	1,590,000,000	2,100,000,000	1,625,000,000
	14,496,441,853	15,407,570,203	14,368,415,453
Total Liabilities.....	17,951,491,464	19,124,232,779	18,326,190,715

Subsection 2.—Revenue and Expenditure

In the fiscal year ended Mar. 31, 1957, Federal Government revenue amounted to \$5,107,000,000 compared with \$4,400,000,000 in the previous year, an increase of \$707,000,000. During the same period expenditure increased by \$406,000,000 from \$4,443,000,000 to \$4,849,000,000. The excess of revenue over expenditure for the fiscal year was \$258,000,000.

Tax revenue and non-tax revenue increased \$652,000,000 and \$55,000,000, respectively, over the previous fiscal year.

7.—Details of Revenue, Years Ended Mar. 31, 1955-57

Revenue	1955	1956	1957
	\$	\$	\$
Ordinary Revenue—			
Tax Revenue—			
Customs import duties.....	397,228,330	481,239,668	549,074,860
Excise duties.....	226,458,438	249,383,313	271,443,661
Income tax.....	2,265,297,267	2,279,503,232	2,745,199,494
Personal ¹	1,183,447,835	1,185,599,785	1,400,451,444
Corporations ¹	1,020,585,823	1,027,727,818	1,268,300,915
On interest, dividends, rents, and royalties going abroad.....	61,263,609	66,175,689	76,447,135
Sales tax (net) ¹	572,214,713	641,510,469	717,080,563
Succession duties.....	44,768,028	66,607,026	79,709,197
Other taxes.....	267,471,304	277,477,462	285,423,996
Totals, Tax Revenue.....	3,773,438,080	3,995,721,170	4,647,931,771
Non-tax Revenue—			
Post Office.....	131,280,099	137,414,587	145,773,393
Return on investments ²	133,486,035	149,316,037	206,655,544
Bullion and coinage.....	1,836,149	3,246,887	4,089,662
Other.....	54,634,163	114,347,958	102,090,510
Totals, Non-tax Revenue.....	321,236,446	404,325,469	458,609,109
Totals, Ordinary Revenue.....	4,094,674,526	4,400,046,639	5,106,540,880
Special Receipts and Other Credits.....	28,838,774	3	3
Grand Totals, Revenue.....	4,123,513,300	4,400,046,639	5,106,540,880

¹ Excludes tax credited to Old Age Security Fund.
Bank of Canada.

² Includes interest on investments, and profits of the
Included under other non-tax revenue.

8.—Details of Expenditure, Years Ended Mar. 31, 1955-57

Expenditure	1955	1956	1957
	\$	\$	\$
Agriculture.....	81,804,056	88,179,697	84,651,787
<i>Freight assistance of western feed grains.....</i>	<i>18,997,834</i>	<i>15,999,464</i>	<i>17,499,934</i>
Other.....	62,806,222	72,180,233	67,151,853
Atomic Energy Control Board.....	14,983,927	18,957,359	21,882,226
Auditor General's Office.....	672,474	651,903	690,331
Canadian Broadcasting Corporation.....	29,236,931	31,155,977	39,266,161
Chief Electoral Officer.....	312,058	445,106	205,722
Citizenship and Immigration.....	27,968,175	32,274,864	44,517,150
Civil Service Commission.....	2,333,042	2,428,238	2,731,240
Defence Production.....	18,878,447	16,075,562	20,469,410
<i>Capital assistance to defence industry.....</i>	<i>9,710,542</i>	<i>6,491,427</i>	<i>9,938,292</i>
Other.....	9,167,905	9,584,135	10,531,118
External Affairs.....	43,777,922	44,909,176	60,227,824
Finance.....	934,075,801	931,271,597	1,152,758,655
<i>Public Debt Charges—</i>			
Interest on public debt.....	477,914,894	492,624,067	520,189,598
Annual amortization of bond discounts and commissions.....	22,369,523	19,920,940	12,508,158
Servicing of public debt.....	775,001	596,261	555,866
Cost of loan flotation.....	1,255,925	1,170,467	1,088,036
Totals, Public Debt Charges.....	502,315,343	514,311,735	534,141,458

8.—Details of Expenditure, Years Ended Mar. 31, 1955-57—concluded

Expenditure	1955	1956	1957
	\$	\$	\$
<i>Finance—concluded</i>			
Provincial subsidies and tax rental payments.....	359,042,900	350,943,932	395,372,437
Government contribution to Civil Service Superannuation Account.....	37,381,978	31,526,248	72,359,996
Reserve for possible losses on realization of active assets.....	—	—	50,000,000
Other.....	55,535,580	34,489,682	100,884,765
<i>Fisheries</i>	11,151,813	12,411,672	13,796,710
Governor General and Lieutenant-Governors.....	400,385	400,395	412,712
Insurance.....	477,088	498,049	543,307
Justice, including Penitentiaries.....	16,423,823	17,317,471	19,065,569
<i>Labour</i>	69,771,586	69,577,960	75,854,286
Unemployment Insurance Act, administration and Government contribution.....	59,939,615	60,533,085	66,357,949
Government annuities (payment required to maintain reserve).....	371,521	—	—
Other.....	9,460,450	9,044,875	9,496,337
<i>Legislation</i>	6,654,556	6,820,670	7,176,643
Mines and Technical Surveys.....	43,747,296	38,227,790	35,926,412
<i>National Defence</i>	1,665,968,960	1,750,112,163	1,759,425,955
Mutual Aid to NATO countries.....	253,379,789	174,966,318	133,552,637
Other.....	1,412,589,171	1,575,145,845	1,625,873,318
<i>National Film Board</i>	3,430,589	4,067,393	4,960,143
National Health and Welfare.....	496,699,592	537,912,259	561,689,067
General health grants.....	31,597,427	33,528,854	36,280,147
Family allowances.....	366,465,965	382,535,026	397,617,840
Old age assistance, blind persons and disabled persons allowances ¹	24,174,701	29,501,735	30,417,187
Deficit Old Age Security Fund.....	45,837,905	63,251,655	56,012,857
Other ²	28,623,594	29,094,989	41,461,036
<i>National Research Council</i>	15,700,525	16,077,844	19,019,561
National Revenue.....	55,010,594	56,070,232	61,823,868
Northern Affairs and National Resources.....	20,155,118	24,615,905	36,970,235
Post Office.....	123,611,055	127,421,739	139,992,921
Privy Council including Prime Minister's Office.....	3,800,361	3,872,993	3,912,157
Public Archives.....	421,302	486,150	577,163
Public Printing and Stationery.....	2,068,013	2,213,716	3,200,656
<i>Public Works</i>	130,780,634	142,101,418	165,336,569
Trans-Canada Highway contributions.....	18,133,982	16,100,554	36,137,664
Other.....	112,646,652	126,000,864	129,198,906
<i>Royal Canadian Mounted Police</i>	35,549,795	36,557,371	43,449,799
Secretary of State.....	2,671,242	2,968,421	3,491,456
Trade and Commerce.....	17,494,834	36,545,671	55,389,457
Transport.....	159,241,707	132,041,121	158,162,525
Veterans Affairs.....	240,089,187	248,459,754	251,457,621
Grand Totals, Expenditure.....	4,275,362,888	4,433,127,636	4,849,035,298

¹Pensions under the Old Age Security Act 1951 (effective January 1952) are paid out of the Old Age Security Fund account and are not recorded under departmental expenditure. See p. 273. ²Includes civil defence.

Subsection 3.—Analysis of Revenue from Taxation

The following analysis of taxation revenue is confined to excise duties, excise taxes, income tax and succession duties; customs receipts constitute a single item in the *Public Accounts* and are not analysed here.

Excise Duties

Excise duties proper are presented below with a summary of the excise tariff and statistics arising as a by-product of administration, such as the quantities of grain and other products used in distillation and the quantities of goods taken out of bond and subject to excise tax.

Canadian Excise Tariff.—The following is a statement of the Canadian excise tariff, as at Aug. 15, 1957:—

Spirits.....	per proof gal.	\$12.00	Spirits used directly in the manufacture of toilet preparations or cosmetics on which excise tax is applicable under Schedule I of the Excise Tax Act.....	per proof gal.	Free
Spirits used by licensed bonded manufacturers.....	per proof gal.	1.50	Canadian brandy.....	per proof gal.	\$10.00
Spirits used in bond for manufacture of perfume.....	per proof gal.	Free	Malt, all, when brought into a brewery.....	per lb.	Free
Spirits used in bond for manufacture of approved chemical compositions.....	per proof gal.	0.15	Beer, all.....	per Imp. gal.	0.38
Spirits sold to druggists licensed under the Excise Act to be used exclusively in preparation of prescriptions for medicines and pharmaceutical preparations....	per proof gal.	1.50	Tobacco, manufactured, all descriptions except cigarettes.....	per lb.	0.35
Spirits distilled from wine produced from native fruits, and used in any bonded manufactory for the treatment of domestic wine.....	per proof gal.	Free	Cigarettes, weighing not more than two and one-half pounds.....	per M	4.00
Spirits imported and taken into a bonded manufactory (in addition to duties otherwise imposed)....	per proof gal.	0.30	Cigarettes, weighing more than two and one-half pounds.....	per M	5.00
			Cigars, all.....	per M	1.00
			Canadian raw leaf tobacco, when sold for consumption.....	per lb.	0.10

A drawback of 99 p.c. of the duty may be granted when domestic spirits, testing not less than 50 p.c. over proof, are delivered in limited quantities for medicinal or research purposes to universities, scientific or research laboratories, public hospitals, or health institutions in receipt of federal and provincial government aid.

9.—Gross Excise Duties Collected, Years Ended Mar. 31, 1953-57

Item	1953	1954	1955	1956	1957
	\$	\$	\$	\$	\$
Spirits.....	48,627,965	69,194,020	72,185,407	77,518,388	86,180,032
Validation fee.....	746,877	—	—	—	—
Beer or malt liquor.....	5,294,283	4,799,823	72,676,281	80,742,806	83,077,741
Malt.....	80,584,283	78,733,288	1,151,032 ¹	—	—
Tobacco and cigarettes.....	116,701,207	96,724,855	100,511,808	110,092,584	120,818,541
Cigars.....	212,817	245,862	241,177	262,477	267,235
Licences.....	38,183	36,519	36,826	35,143	35,556
Totals².....	252,205,615	249,734,366	246,802,531	268,651,398	290,379,105

¹ Tax on malt replaced by gallonage tax on beer.

² These totals do not agree with net excise duties as shown in Table 7 because refunds, drawbacks and, for spirits, a transfer tax are included here.

Statistics of Licences and Distillation.—As a result of the collection of excise duties, statistics are compiled of excise licences issued and of distillation.

10.—Statistics of Licences and Distillation, Years Ended Mar. 31, 1953-57

Item	1953	1954	1955	1956	1957
Licences issued.....	No. 29	No. 29	No. 30	No. 30	No. 28
Licence fees.....	\$ 7,750	\$ 7,500	\$ 8,000	\$ 6,500	\$ 7,750
Grain, etc., Used for Distillation—					
Malt.....	lb. 31,169,426	34,770,622	37,438,384	40,523,848	41,788,225
Indian corn.....	" 193,629,683	223,715,461	233,470,614	256,237,853	281,299,649
Rye.....	" 30,404,971	42,888,000	40,697,817	50,297,683	55,480,416
Wheat and other grain.....	" 17,996,080	828,440	26,448,064	3,013,785	803,490
Totals, Grain Used.....	lb. 273,200,160	302,202,523	338,054,879	350,073,169	379,371,780
Molasses used.....	lb. 22,614,185	21,965,692	31,922,119	35,793,467	35,471,876
Wine and other materials.....	" 4,674,714	3,696,117	5,721,010	5,303,650	4,114,008
Sulphide liquor.....	gal. 98,380,740	394,040,231	370,916,068	409,830,302	368,070,334
Proof spirits manufactured...proof gal.	22,517,166	24,710,625	27,330,433	28,535,869	30,028,834

The quantity of spirits manufactured has fluctuated greatly since 1920, varying from a low of 2,356,329 proof gal. in that year to a high of 35,555,059 proof gal. recorded in 1945. The total for 1957 was 30,028,834 proof gal.

Alcohol and Tobacco Taken Out of Bond.—The amounts of beverage spirits, malt beer, malt, cigars, cigarettes and other tobacco taken out of bond for consumption are given in Table 36, p. 965.

Excise Taxes Collected

The statistics given in Table 11 represent gross excise tax collection by the Excise Division of the Department of National Revenue.

11.—Excise Taxes Collected by Commodity, Years Ended Mar. 31, 1953-57

(Accrued Revenue)

Commodity	1953	1954	1955	1956	1957
	\$	\$	\$	\$	\$
Domestic—					
Automobiles, tires and tubes.....	78,810,971	92,498,632	71,356,616	63,298,865	69,314,263
Beverages.....	12,342,608	11,577,882	8,078,328	8,607,286	8,848,161
Candy and chewing gum.....	11,216,434	11,812,938	9,121,728	8,390,591	9,021,685
Carbonic acid gas.....	214,538	220,859	158,453	147,937	139,378
Cigars, cigarettes and tobacco.....	100,678,509	110,946,708	112,677,653	125,107,756	130,581,694
Electrical and gas apparatus.....	3,269,802	3,701,518	406,613	...	...
Embossed cheques (departmental)...	334,884	...	...	...	...
Furs.....	5,213,346	3,366,217	54,591	...	...
Licences.....	86,768	86,568	84,160	82,062	84,520
Lighters.....	235,889	218,211	124,684	80,674	69,640
Matches.....	1,071,159	1,019,072	656,642	597,394	604,431
Other taxes on manufactures.....	13,176,366	11,200,616	4,907,621	4,522,546	5,387,461
Phonographs, radios and tubes.....	10,085,974	15,874,817 ¹	20,521,374 ¹	21,640,746 ¹	17,763,111 ¹
Playing cards.....	723,600	709,600	649,915	648,975	635,202
Sales, domestic.....	611,362,280	633,817,293	616,558,675	676,008,159	764,048,020
Stamps.....	10,226,135	...	...	...	...
Toilet preparations.....	6,961,538	6,768,726	5,016,582	5,335,626	5,828,044
Wines.....	2,215,540	2,230,673	2,354,267	2,485,760	2,618,324
Penalties and interest.....	374,691	309,888	342,250	315,014	399,648
Totals, Domestic.....	868,601,032	906,360,218	853,070,152	917,269,391	1,015,343,582
Imported.....	135,346,520	146,539,166	137,438,524	166,931,249	176,714,583
Grand Totals.....	1,003,947,546	1,052,899,387	990,508,676	1,084,200,640	1,192,058,165

¹ Includes tax on television sets and tubes of \$11,340,860 in 1954, \$16,668,388 in 1955, \$17,627,314 in 1956 and \$12,443,101 in 1957.

Income Tax

Income Tax Collections by the Department of National Revenue on a Fiscal Year Basis.—Statistics of income tax collections are gathered at the time the payments are made and are therefore up-to-date. Over 85 p.c. of individual taxpayers are wage or salary earners who have almost the whole of their tax liability deducted at the source by their employers. All other taxpayers are required to pay most of their estimated tax during the taxation year. Thus, the greater part of the tax is collected during the same year in which the related income is earned and only a limited residue remains to be collected when the returns are filed. The collections for a given fiscal year include tax deductions and instalments for twelve months, embracing portions of two taxation years, and a mixture of year-end payments for the first of these years and for the preceding year, and cannot therefore be closely related to the statistics for a given taxation year. As little information about a taxpayer is received when the payment is made and as a single cheque from one employer may frequently cover the tax payments of hundreds of employees, the payments cannot be statistically related to taxpayers by occupation or income. Descriptive classifications of taxpayers are available only from tax returns but collection statistics, if interpreted with the current tax structure and the above factors in mind, indicate the trend of income in advance of the final compilation of statistics.

The statistics given in Table 12 pertain to tax collections by the Taxation Division of the Department of National Revenue. The collections are for fiscal years ended Mar. 31.

12.—Taxes Collected by the Taxation Division of the Department of National Revenue, Years Ended Mar. 31, 1947-56

NOTE.—Figures for 1917-34 are given in the 1947 Year Book, pp. 999-1000; for 1935-46 in the 1951 edition, p. 994.

Year Ended Mar. 31—	Income Tax			Excess Profits Tax	Succession Duties	Total Collections
	Individual	Corporation	Total			
	\$	\$	\$	\$	\$	\$
1947.....	724,666,292 ¹	238,791,953	963,458,245 ¹	448,697,443 ¹	23,576,071	1,435,731,759 ¹
1948.....	695,717,243	364,131,114	1,059,848,357	227,030,494	30,828,040	1,317,706,891
1949.....	806,009,280	491,990,124	1,297,999,404	44,791,918	25,549,777	1,368,341,099
1950.....	669,457,059	603,193,132	1,272,650,191	—1,788,387 ²	29,919,780	1,300,781,584
1951.....	713,985,999	799,196,511	1,513,135,510	10,140,910	33,599,089	1,556,875,509
1952.....	1,030,793,334 ³	1,132,680,074 ³	2,163,473,408 ³	2,364,909	38,207,985	2,204,046,302
1953.....	1,278,949,939 ³	1,276,940,150 ³	2,555,890,089 ³	—	38,070,529	2,593,960,618
1954.....	1,332,116,907 ³	1,246,786,598 ³	2,578,903,505 ³	—	39,137,594	2,618,041,099
1955.....	1,345,611,443 ³	1,066,585,823 ³	2,412,197,266 ³	—	44,768,029	2,456,965,295
1956.....	1,354,275,414 ³	1,081,055,813 ³	2,435,331,232 ³	—	66,607,026	2,501,938,258

¹ Includes refundable portion of taxes.

² Refunds arising out of renegotiation of war contracts were in excess of collections.

³ Includes old age security tax.

Individual Income Tax Statistics.—Individual income tax statistics are presented in Table 13 on a calendar-year basis and are compiled from a 10-p.c. sample of all returns received. Taxpayers are shown for certain selected cities and occupational classifications.

13.—Number of Taxpayers and Amounts of Income and Tax by Selected Cities and Occupational Class 1954

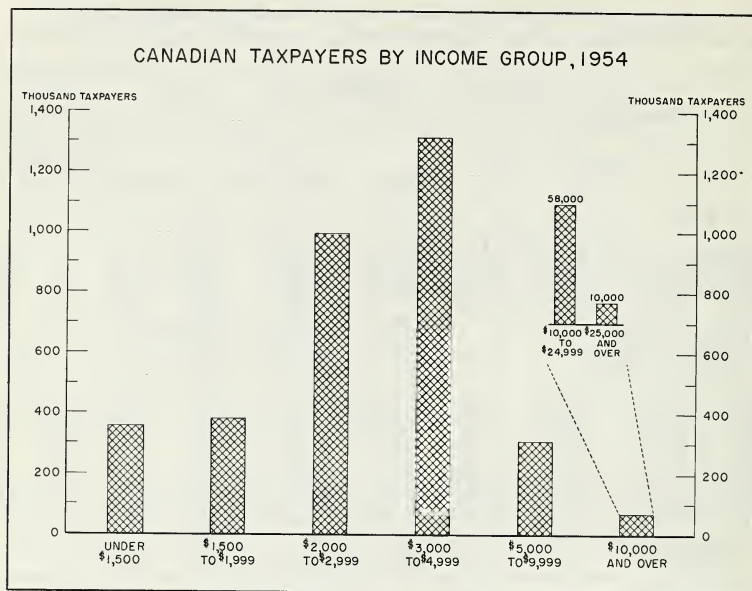
City	Tax- payers	Total Income Assessed	Tax Payable ¹	Class	Tax- payers	Total Income Assessed	Tax Payable ¹
City	No.	\$'000	\$'000	Occupational Class	No.	\$'000	\$'000
St. John's.....	15,670	52,547	4,883	Farmers and fishermen.....	43,420	155,529	13,160
Halifax.....	36,060	119,928	10,158	Farmers.....	39,480	139,161	11,486
Saint John.....	17,590	54,574	4,147	Fishermen.....	3,940	16,368	1,674
Montreal.....	456,990	1,650,701	155,481	Professionals.....	35,120	309,912	61,970
Quebec.....	48,290	158,839	11,904	Accountants.....	3,330	28,619	5,414
Sherbrooke.....	11,610	37,899	2,917	Medical doctors.....	9,920	117,956	25,022
Ottawa.....	78,310	281,953	28,833	Dentists.....	4,120	32,531	5,046
Toronto.....	537,190	1,952,031	223,488	Lawyers and notaries.....	6,660	67,374	16,225
Oshawa.....	16,990	58,965	5,369	Engineers and archi- tects.....	1,910	23,033	5,424
Hamilton.....	92,780	322,528	31,948	Nurses.....	3,300	6,636	440
St. Catharines.....	20,230	74,268	7,330	Other professionals....	6,890	33,763	4,399
Niagara Falls.....	15,990	57,880	5,330	Employees.....	3,032,300	9,715,488	817,545
Kitchener and Waterloo	27,320	93,910	9,631	Salesmen.....	38,490	177,321	19,176
London.....	45,220	149,823	13,436	Business proprietors....	169,660	843,431	110,227
Windsor.....	49,680	178,322	17,096	Investors.....	68,090	409,166	66,410
Sudbury and Copper Cliff.....	30,820	115,486	10,429	Pensioners.....	10,540	32,641	2,236
Fort William and Port Arthur.....	25,140	83,063	7,016	All others.....	12,540	63,417	6,668
Winnipeg.....	126,330	422,769	40,025	Totals.....	3,410,160	11,706,905	1,097,392
Regina.....	31,820	106,328	10,767				
Saskatoon.....	20,910	72,336	7,235				
Calgary.....	61,090	221,977	24,416				
Edmonton.....	77,450	264,732	26,564				
Vancouver.....	173,170	628,771	68,505				
New Westminster.....	24,050	82,966	7,795				
Victoria.....	36,900	126,230	10,945				
Other localities.....	1,332,560	4,340,979	351,744				
Totals.....	3,410,160	11,706,905	1,097,392	Totals.....	3,410,160	11,706,905	1,097,392

¹ Includes old age security tax.

14.—Individual Income Tax Statistics by Income Class 1953 and 1954

Income Class	Taxpayers		Total Income Assessed		Tax Payable ¹		Average Tax ¹	
	1953	1954	1953	1954	1953	1954	1953	1954
	No.	No.	\$'000	\$'000	\$'000	\$'000	\$	\$
Under \$1,500.....	369,350	357,150	444,116	430,573	16,039	14,283	43	40
\$1,500 under \$1,600...	77,130	75,420	119,456	116,665	6,605	5,981	86	79
\$1,600 " \$1,700...	76,400	76,180	125,803	125,356	7,605	7,090	100	93
\$1,700 " \$1,800...	78,470	77,210	137,168	134,826	9,143	8,242	117	107
\$1,800 " \$1,900...	78,960	79,650	145,729	146,845	10,353	9,608	131	121
\$1,900 " \$2,000...	76,120	74,430	148,141	144,985	11,208	10,062	147	135
Totals, \$1,500 and under \$2,000.....	387,080	382,890	676,297	668,677	44,914	40,983	116	107
\$2,000 under \$2,100...	83,130	84,790	170,202	173,562	12,183	11,516	147	136
\$2,100 " \$2,200...	85,060	84,500	182,651	181,220	12,607	11,884	148	141
\$2,200 " \$2,300...	89,450	86,470	200,885	194,144	13,846	12,661	155	146
\$2,300 " \$2,400...	92,240	92,000	216,461	215,852	14,426	13,417	157	146
\$2,400 " \$2,500...	101,530	97,300	248,336	237,978	16,291	14,822	160	152
\$2,500 " \$2,600...	102,760	101,520	261,568	258,594	16,791	15,629	163	154
\$2,600 " \$2,700...	108,620	107,620	287,345	284,557	18,005	16,642	166	155
\$2,700 " \$2,800...	108,360	110,750	297,648	304,035	18,689	18,144	172	164
\$2,800 " \$2,900...	109,290	108,610	311,084	309,051	19,645	18,614	180	171
\$2,900 " \$3,000...	111,050	106,570	327,201	313,884	21,003	18,833	189	177
Totals, \$2,000 and under \$3,000.....	991,490	980,130	2,503,381	2,472,877	163,486	152,162	165	155
\$3,000 under \$3,100...	110,440	110,990	336,166	337,940	21,981	20,513	199	185
\$3,100 " \$3,200...	109,330	109,460	343,881	344,248	22,814	21,367	209	195
\$3,200 " \$3,300...	103,410	104,670	335,280	340,153	22,777	21,799	220	208
\$3,300 " \$3,400...	100,420	102,450	335,833	342,662	23,230	22,256	231	217
\$3,400 " \$3,500...	95,520	97,690	329,153	336,525	23,153	22,363	242	229
\$3,500 " \$4,000...	384,500	390,970	1,432,531	1,456,531	111,791	105,417	291	270
\$4,000 " \$4,500...	236,330	245,420	997,780	1,036,125	88,685	84,781	375	345
\$4,500 " \$5,000...	145,050	151,770	685,150	716,591	67,273	64,662	464	426
Totals, \$3,000 and under \$5,000.....	1,285,000	1,313,420	4,795,774	4,910,775	381,704	363,158	297	276
\$5,000 under \$6,000...	149,290	158,770	809,882	861,187	87,817	86,373	588	544
\$6,000 " \$7,000...	67,120	71,450	431,741	459,161	52,713	51,221	785	717
\$7,000 " \$8,000...	36,880	38,110	274,806	283,558	36,345	34,724	985	911
\$8,000 " \$9,000...	22,630	23,450	192,137	198,306	27,866	25,863	1,231	1,103
\$9,000 " \$10,000...	16,220	16,120	153,847	152,252	23,899	21,495	1,473	1,333
Totals, \$5,000 and under \$10,000...	292,140	307,900	1,862,413	1,954,464	228,640	219,676	783	713
\$10,000 under \$15,000	36,250	38,170	436,854	458,059	79,566	75,731	2,195	1,984
\$15,000 " \$20,000	13,200	14,000	225,118	240,863	53,038	52,035	4,018	3,717
\$20,000 " \$25,000	5,760	6,310	128,077	139,932	35,453	35,242	6,155	5,585
Totals, \$10,000 and under \$25,000...	55,210	58,480	790,049	838,854	168,057	163,008	3,044	2,787
\$25,000 under \$50,000	7,310	8,270	240,046	272,692	79,747	81,417	10,909	9,845
\$50,000 and over.....	1,950	1,920	154,645	157,993	64,675	62,705	33,164	32,659
Totals, \$25,000 and over.....	9,260	10,190	394,691	430,685	144,422	144,122	15,596	14,143
Grand Totals....	3,389,530	3,410,160	11,466,721	11,706,905	1,147,262	1,097,392	338	322

¹ Includes old age security tax.



Corporation Income Tax Statistics.—Corporation statistics presented in Tables 15 and 16 are on a taxation-year basis prior to assessment. The data were extracted and compiled from the returns shortly after they were filed and are as declared by the taxpayer without the scrutiny or revision of the Department of National Revenue. Provincial figures contain an unavoidable bias in favour of Ontario and Quebec because many large corporations operating across Canada file their returns in one or other of these two provinces.

15.—Summary Statistics for Corporations Reporting a Profit, Taxation Years 1953 and 1954

Item	1953			1954		
	Corporations Reporting	Current Year Profit	Income Tax Declared ¹	Corporations Reporting	Current Year Profit	Income Tax Declared ¹
	No.	\$'000	\$'000	No.	\$'000	\$'000
Active taxable corporations—excluding co-operatives and Crown corporations...	34,664	2,639,848	1,150,319	36,393	2,398,518	1,010,357
Inactive corporations.....	876	711	140	878	677	168
Co-operatives.....	2,000	10,386	3,428	1,875	9,262	2,914
Crown corporations.....	5	15,025	7,328	6	14,918	7,265
Totals, Taxable Corporations.....	37,545	2,665,970	1,161,215	39,152	2,423,375	1,020,704
Personal corporations.....	1,469	21,624	—	1,632	24,359	—
Other exempt corporations ²	2,644	21,527	11	2,940	32,593	14
Totals, Taxable and Exempt.....	41,658	2,709,121	1,161,226	43,724	2,480,327	1,020,718

¹ Includes old age security tax. here as tax declared.

² Includes foreign corporations paying \$100 filing fee which is recorded

**16.—Distribution of Active Taxable Corporations Reporting a Profit by Income Class,
Industry and Province, Taxation Years 1953 and 1954**

Income Class, Industrial Division and Province	1953			1954		
	Corporations Reporting	Current Year Profit	Income Tax Declared ¹	Corporations Reporting	Current Year Profit	Income Tax Declared ¹
	No.	\$'000	\$'000	No.	\$'000	\$'000
Income Class						
Under \$1,000.....	4,936	2,092	295	5,389	2,300	330
\$1,000 to \$2,000.....	3,149	4,563	698	3,466	5,051	781
\$2,000 to \$3,000.....	2,402	5,927	1,007	2,658	6,499	1,089
\$3,000 to \$4,000.....	1,898	6,562	1,194	2,178	7,559	1,307
\$4,000 to \$5,000.....	1,681	7,507	1,376	1,750	7,814	1,356
\$5,000 to \$10,000.....	5,888	43,124	8,274	5,649	40,687	7,474
\$10,000 to \$15,000.....	3,295	40,348	8,441	3,415	41,912	7,877
\$15,000 to \$20,000.....	2,561	45,014	9,834	3,316	58,871	11,285
\$20,000 to \$25,000.....	1,455	32,176	8,087	1,664	36,582	7,903
\$25,000 to \$50,000.....	2,713	95,891	31,447	2,690	94,902	29,187
\$50,000 to \$100,000.....	1,812	126,174	50,103	1,696	119,165	45,467
\$100,000 to \$250,000.....	1,525	235,797	103,165	1,323	208,329	88,598
\$250,000 to \$500,000.....	623	218,181	99,992	562	194,092	86,164
\$500,000 to \$1,000,000.....	361	250,552	114,720	308	215,839	88,209
\$1,000,000 to \$5,000,000.....	290	587,716	275,337	265	554,477	254,407
Over \$5,000,000.....	75	938,224	436,349	64	804,439	368,923
Totals.....	34,664	2,639,848	1,150,319	36,393	2,398,518	1,010,357
Industrial Division						
Agriculture, fishing and forestry.....	572	10,024	3,418	631	12,315	3,994
Mining.....	507	146,035	67,090	513	146,729	63,916
Manufacturing.....	9,095	1,446,658	650,896	9,117	1,233,396	543,088
Construction.....	2,673	105,399	41,538	3,155	104,003	38,839
Transportation, storage and com- munication.....	1,671	197,586	89,491	1,733	146,194	63,696
Public utilities.....	134	54,324	23,194	147	50,466	20,959
Wholesale trade.....	5,699	206,056	83,290	6,231	174,781	64,800
Retail trade.....	6,515	179,786	75,416	6,439	158,689	61,977
Service.....	3,301	62,566	22,939	3,372	60,298	21,031
Finance.....	4,493	231,408	93,047	5,055	311,707	128,057
Unclassified.....	4	6	—	—	—	—
Province						
Newfoundland.....	414	24,503	10,776	423	26,857	11,570
Prince Edward Island.....	159	3,307	1,133	155	2,337	651
Nova Scotia.....	1,189	38,226	15,992	1,202	34,407	13,896
New Brunswick.....	766	28,037	12,113	769	27,239	11,345
Quebec.....	9,095	820,593	337,436	9,302	798,094	322,293
Ontario.....	12,270	1,272,510	576,290	13,211	1,088,631	478,293
Manitoba.....	1,853	98,262	44,403	1,909	87,629	38,206
Saskatchewan.....	980	22,369	8,668	946	17,403	6,239
Alberta.....	2,522	104,658	43,981	2,676	96,262	36,152
British Columbia.....	5,416	227,383	99,527	5,800	219,659	91,712

¹ Includes old age security tax.

Succession Duties

A history of succession duties in Canada, together with examples of the occurrences of federal duty on typical estates and of combined federal and provincial duties on typical estates, is given in the 1956 Year Book, pp. 1064-1068.

At Dec. 31, 1957, only Ontario and Quebec among the provinces remained in this field. The deduction in the federal duty in respect of provincial duty was raised in 1957 for the estates of all persons dying on or after Apr. 1, 1957, to one-half of the federal duty on doubly taxed property and one-half the federal duty on pensions in the estates of persons domiciled in Quebec or Ontario.

An Agreement between Canada and Ireland came into effect on Dec. 20, 1955.

Table 17 shows the receipts of the various governments from succession duties for 1954-57.

17.—Federal and Provincial Net Revenue from Succession Duties, Years Ended Mar. 31, 1954-57

NOTE.—Statistics for 1948-52 are given in the 1954 Year Book, p. 1080, and for 1953 in the 1956 edition, p. 1064.

Province	1954	1955	1956	1957
	\$'000	\$'000	\$'000	\$'000
Federal.....	39,138	44,768	66,607	79,709
Provincial— ¹				
Newfoundland.....	—	—	—	—
Prince Edward Island.....	—	—	—	—
Nova Scotia.....	5	2	5	2
New Brunswick.....	6	—	—	—
Quebec.....	10,913	13,000	46,558	33,750
Ontario.....	20,164	23,000	25,463	25,000
Manitoba.....	5	3	5	5
Saskatchewan.....	23	23	10	10
Alberta.....	17	5	5	5
British Columbia.....	—	—	—	—

¹ Under terms of the 1952 Dominion-Provincial Taxation Agreements all provinces except Ontario and Quebec refrain from levying succession duties; amounts shown for other provinces are arrears. Provincial figures for 1957 are preliminary.

The federal legislation was amended, effective for the estates of persons dying on or after Apr. 1, 1957, by allowing a full 50-p.c. reduction of the federal duty on any property which had been taxed by Canada and a prescribed province (Ontario and Quebec) and a similar 50-p.c. reduction in the federal duty on pensions in the estates of persons dying domiciled in the said provinces. Another amendment provides that charitable successions may be deducted from the aggregate net value of the estate so that the amount of such items will not result in increasing the rates of duty paid by other successors.

If gift tax payable under the provisions of the Income Tax Act has been paid in connection with the transfer made by a deceased person during his lifetime, then no succession duty is payable in respect of such gift except to the extent that succession duty thereon is in excess of the gift tax.

Subsection 4.—Subsidies and Taxation Agreements with the Provinces

Subsidies.—A summary history of certain annual payments made by the Federal Government to the provinces under the provisions of the British North America Act and subsequent arrangements entered into from time to time appear in the 1956 Year Book, pp. 1068-1069.

The following table shows individual subsidy allowances by province for the years ended Mar. 31, 1956 and 1957.

18.—Individual Subsidy Allowances by Province, Years Ended Mar. 31, 1956 and 1957

(Thousands of dollars)

Year and Subsidy	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1956											
Allowance for governments.....	180	100	190	190	240	240	220	220	220	220	2,020
Allowance on basis of population.....	289	87	514	413	2,933	3,259	656	697	820	932	10,600
Interest on debt allowance.....	—	39	53	26	128	142	382	405	405	29	1,609
Special Grants—											
Additional Annual Subsidy—											
Statutes 1949, c. 1.....	1,100	—	—	—	—	—	—	—	—	—	1,100
Statutes 1942, c. 14.....	—	275	1,300	900	—	—	—	—	—	—	2,475
Statutes 1887, c. 8 and R.S. 1927, c. 12.....	—	20	—	—	—	—	—	—	—	—	20
Statutes 1912, c. 42.....	—	100	—	—	—	—	—	—	—	—	100
In lieu of public lands.....	—	6	—	—	—	—	562	750	750	100	2,168
In settlement of steamship services claims.....	—	30	—	—	—	—	—	—	—	—	30
In lieu of export duty on lumber... ..	—	—	—	150	—	—	—	—	—	—	150
Totals, 1956.....	1,569	657	2,057	1,679	3,301	3,641	1,320	2,072	2,195	1,281	20,272
1957											
Allowance for governments.....	180	100	190	190	240	240	220	220	220	220	2,020
Allowance on basis of population.....	289	87	514	413	2,933	3,259	680	705	899	932	10,711
Interest on debt allowance.....	—	39	53	26	128	142	382	405	405	29	1,609
Special Grants—											
Additional Annual Subsidy—											
Statutes 1949, c. 1.....	1,100	—	—	—	—	—	—	—	—	—	1,100
Statutes 1942, c. 14.....	—	275	1,300	900	—	—	—	—	—	—	2,475
Statutes 1887, c. 8 and R.S. 1927, c. 12.....	—	20	—	—	—	—	—	—	—	—	20
Statutes 1912, c. 42.....	—	100	—	—	—	—	—	—	—	—	100
In lieu of public lands.....	—	6	—	—	—	—	750	750	750	100	2,356
In settlement of steamship services claims.....	—	30	—	—	—	—	—	—	—	—	30
In lieu of export duty on lumber....	—	—	—	150	—	—	—	—	—	—	150
Totals, 1957.....	1,569	657	2,057	1,679	3,301	3,641	2,032	2,080	2,274	1,281	20,571

Taxation Agreements.—Early in World War II, in order to provide revenue for heavy national expenditures and at the same time control inflationary tendencies, the provincial governments vacated the income and corporation tax fields in favour of the Federal Government for the duration of the War and a limited period thereafter, after agreeing to the terms of a tax rental fee from the Federal Government. These Agreements of 1942 were succeeded by Tax Rental Agreements 1952. Under the 1952 Agreements, all provinces except Ontario and Quebec agreed to lease their personal and corporation income taxes, special corporation taxes and succession duties to the Government of Canada in exchange for a rental fee. Ontario, which had not entered into the 1947 Agreements, also agreed to lease personal and corporation income taxes and special corporation taxes

but retained the right to levy succession duties. In 1952 the nine provinces received \$303,000,000 in tax rental fees compared with \$96,000,000 received by the eight provinces in 1951.

The Wartime Tax Agreements of 1942 are outlined in the 1946 Year Book, pp. 900-901. The 1947 and 1952 Tax Rental Agreements are outlined at pp. 1087-1090 of the 1954 edition.

With the 1952 Rental Agreements expiring at Mar. 31, 1957, conferences were held with the provinces in April and October 1955 and March 1956 to discuss new financial arrangements. At the October meeting the Federal Government put forward certain suggestions for discussion. These were revised and became part of the actual proposals made by letter on Jan. 6, 1956. Some further revisions in detail were made following a meeting with the provinces on Mar. 9, 1956, and the final proposals were incorporated in a Bill presented to Parliament in July 1956, entitled the Federal-Provincial Tax-Sharing Arrangements Act. This Act received Royal Assent on July 31, 1956.

The new proposals differ substantially in principle from those previously in effect, for, while provision is still made for tax rental agreements in the fields of individual and corporation income tax and succession duties, the rental fee payable is directly related to the return from these fields at agreed rates in the province concerned.

The fiscal aid subsidies which were formerly contained in the tax rental fees will now be separated from such fees and contained in specific payments called "tax equalization payments". These payments are to be used to bring the per capita yield from standard taxes in a province in a year up to the level of the two provinces for which the per capita standard taxes for that year are greatest.

The standard taxes involved are: (a) individual income tax at 10 p.c. of the Federal tax; (b) corporation income tax at 9 p.c. of corporation taxable income; and (c) succession duties at 50 p.c. of the federal duties averaged over a three-year period.

In addition, provincial revenue stabilization payments are provided which will support the payments to a province at a level determined by the greatest of: (a) the adjusted 1957 tax rental payment which is the amount payable in 1956-57 to any province whether under an agreement or not, adjusted for any population changes in the year in question; (b) the projected tax rental payment which is the amount that would be payable to any province in a year if the 1952 tax rental agreements were to be extended into the year in question; and (c) the basic stabilization amount which for 1958-59 is 95 p.c. of the amount of tax equalization payments, provincial revenue stabilization payments and current tax rental payments applicable to the province in 1957-58; and, for subsequent years, 95 p.c. of the average of such payments in the two previous years.

The tax equalization payments and the provincial revenue stabilization payments are payable to a province regardless of any action they may take in these tax fields. Tax rental payments are subject to agreement.

Rental agreements have been entered into with all provinces except Quebec and Ontario in all three tax fields. Ontario has rented the individual income tax to the Federal Government but levies its own corporation income and corporation taxes and succession duties. Quebec continues to levy all three taxes. Where a province levies its own taxes, there is a reduction of federal tax provided at the standard rate noted above.

Following a Dominion-Provincial Conference in November 1957, an interim measure covering the fiscal year commencing Apr. 1, 1958, was introduced in the House of Commons on Jan. 27, 1958, increasing from 10 p.c. to 13 p.c. that portion of the "standard individual income tax" which the ten provinces were entitled to receive under the Federal-Provincial Tax-Sharing Arrangements Act of 1956. Linked with the above was a second measure providing Atlantic adjustment grants of \$25,000,000 for each of four fiscal years and divided as follows: Nova Scotia, New Brunswick and Newfoundland each \$7,500,000, and Prince Edward Island \$2,500,000.

Subsection 5.—National Debt

A brief commentary dealing with the national debt of the Government of Canada from 1914 appears at p. 1091 of the 1954 Year Book. The following table summarizes the debt position during the period 1948-57 as to interest and amount outstanding. Details of unmatured debt and treasury bills outstanding and information on new security issues of the Federal Government may be found in the *Public Accounts of Canada*. They are summarized by standard classifications in DBS publication *Financial Statistics of the Government of Canada*.

19.—Summary of the Public Debt and Interest Payments Thereon, Years Ended Mar. 31, 1948-57

NOTE.—Statistics for 1867-1913 are given in the 1942 Year Book, p. 775; those for 1914-35 in the 1947 edition, p. 972; and those for 1936-47 in the 1951 edition, p. 1009.

Year	Gross Debt	Net Active Assets	Net Debt	Net Debt Per Capita ¹	Increase or Decrease of Net Debt During Year	Interest Paid on Debt	Interest Paid per Capita ²
	\$	\$	\$	\$	\$	\$	\$
1948.....	17,197,348,981	4,825,712,088	12,371,636,893	964.80	-676,119,656	455,455,204	36.29
1949.....	16,950,403,795	5,174,269,643	11,776,134,152	875.74	-595,502,741	465,137,958 ³	36.27
1950.....	16,750,756,246	5,106,147,047	11,644,609,199	849.23	-131,524,953	439,816,335	32.71
1951.....	16,923,307,028	5,489,992,080	11,433,314,948	816.14	-211,294,251	425,217,500	31.01
1952.....	17,257,668,676	6,072,387,129	11,185,281,546	773.59	-248,033,402	432,423,082 ⁴	30.87
1953.....	17,918,490,812 ⁵	6,756,756,543 ⁵	11,161,734,269	751.88	-23,547,277	451,339,521	31.21
1954.....	17,923,189,502 ⁵	6,807,252,438 ⁵	11,115,937,064	727.15	-45,797,205	476,061,625	32.07
1955.....	17,951,491,464 ⁵	6,688,411,310 ⁵	11,263,080,154	717.49	147,143,090	477,914,894	31.26
1956.....	19,124,232,779 ⁵	7,843,863,815 ⁵	11,280,368,964	701.47	17,288,810	492,624,067	31.38
1957.....	18,326,190,715 ⁵	7,318,539,557 ⁵	11,007,651,158	663.55	-272,717,806	520,189,398	32.35

¹ Based on the official estimates of population for June 1 of the year indicated (see p. 119).

² Based on

the official estimates of population for June 1 of the year immediately preceding the one indicated (see p. 119).

³ The apparent increase in interest paid results from the accrued interest on refundable taxes having been charged in the year of repayment.

⁴ Excludes \$87,510,068 adjustment required to place interest on public debt on accrued basis.

⁵ These figures are not strictly comparable with those for 1952 and previous years chiefly because of changed methods in accounting for cash.

Guaranteed Debt.—In addition to the direct debt of the Federal Government already dealt with, there are large indirect obligations arising mainly out of the guarantee of securities by the Federal Government of the railway lines that now form the Canadian National Railways and the subsequent extensions thereof. Since 1932, guarantees of certain bank loans have been made under the various Relief Acts, the National Housing Act, the Farm Improvement Loans Act, and the Veterans Business and Professional Loans Act. When the Bank of Canada commenced business on Mar. 11, 1935, the guarantee of the deposit required to be maintained in the Bank of Canada by every chartered bank came into force. This guarantee must be implemented "in the event of the property and assets of the Bank being insufficient to pay its liabilities and/or if the Bank suspends payment of any of its liabilities".

20.—Guaranteed Debt of the Government of Canada—Amounts Held by the Public as at Mar. 31, 1957

NOTE.—These contingent liabilities are expressed in Canadian dollars; stocks and bonds payable solely in Sterling are converted on the basis of £1=\$2.80, and United States dollars are considered at par with the Canadian dollar.

Item	Amount of Guarantee Authorized	Amount Held by Public at Mar. 31, 1957
	\$	\$
Railway Securities Guaranteed as to Principal and Interest—		
Canadian National Ry. Co. 4½ p.c. gold bonds due 1957.....	65,000,000	64,136,000
Canadian Northern Ry. Co. 3½ p.c. debenture stock due 1958, £1,622,586/19/9...	7,896,590	5,500,208
Canadian National Ry. Co. 3 p.c. bonds due 1959.....	35,000,000	35,000,000
Canadian Northern Alberta Ry. Co. 3½ p.c. debenture stock due 1960, £647,260/5/6.....	3,150,000	316,856
Canadian Northern Ontario Ry. Co. 3½ p.c. debenture stock due 1961, £7,350,000/0/0.....	35,770,000	2,069,805
Grand Trunk Pacific Ry. Co. 3 p.c. bonds due 1962, £14,000,000/0/0.....	68,040,000	26,465,130
Canadian Northern Alberta Ry. Co. 3½ p.c. debenture stock due 1962, £733,561/12/10.....	3,570,000	—
Grand Trunk Pacific Ry. Co. 4 p.c. bonds due 1962, £3,280,000/0/0.....	15,940,800	7,999,074
Canadian National Ry. Co. 2½ p.c. bonds due 1963.....	250,000,000	250,000,000
Canadian National Ry. Co. 3 p.c. bonds due 1966.....	35,000,000	35,000,000
Canadian National Ry. Co. 2½ p.c. bonds due 1967.....	50,000,000	50,000,000
Canadian National Ry. Co. 2 p.c. bonds due 1969.....	70,000,000	70,000,000
Canadian National Ry. Co. 2 p.c. bonds due 1971.....	40,000,000	40,000,000
Canadian National Ry. Co. 3 p.c. bonds due 1974.....	200,000,000	200,000,000
Canadian National Ry. Co. 2½ p.c. bonds due 1975.....	6,000,000	6,000,000
Railway Securities Guaranteed as to Interest Only—		
Grand Trunk 5 p.c. perpetual debenture stock, £1,270,375/0/0.....	20,782,492	51,190
Grand Trunk 4 p.c. perpetual debenture stock, £24,624,455/0/0.....	119,839,014	5,166
Other Guarantees—		
Province of Manitoba Treasury Bill.....	250,000	250,000
Deposits maintained by chartered banks in Bank of Canada.....	Unstated	519,458,503
Loans made by approved lending institutions under National Housing Acts prior to 1954 Act.....	Unstated	Indeterminate
Loans made by lenders under Part IV of the National Housing Act 1954 for home extensions and improvements.....	10,000,000	2,815,000 ¹
Guarantees to owners of returns from moderate-rental housing projects.....	Unstated	Indeterminate
Insured loans made by approved lenders under the National Housing Act 1954.....	4,000,000,000	1,083,000,000 ²
Guarantees under Export Credits Insurance Act Part I.....	100,000,000	61,011,947
Guarantees under Export Credits Insurance Act Part II.....	12,750,000	5,100,000
Loans made by chartered banks under the Farm Improvement Loans Act.....	58,952,089	35,309,765
Loans made by chartered banks under the Veterans Business and Professional Loans Act.....	Indeterminate	986,105
Loans made by chartered banks under the Fisheries Improvement Loans Act.....	Indeterminate	50,279
Loans made by chartered banks under the Prairie Grain Producers' Interim Financing Act 1951.....	5,000,000	238
Loans made by chartered banks under the Prairie Grain Producers' Interim Financing Act 1956.....	Indeterminate	465,594
Loans made by chartered banks to Canadian Wheat Board.....	150,000,000	64,437,942

¹ As at Dec. 31, 1956.

² As reported, in accordance with Sect. 45 National Housing Loans Regulations, by approved lenders for their respective fiscal year-ends between Oct. 31 and Dec. 31, 1956.

Section 3.—Provincial Public Finance

Provincial government accounting and reporting practices vary considerably so that certain adjustments to the *Public Accounts* figures are required in order to produce comparable statistics. For example, transactions relating to a specific function are sometimes excluded from ordinary account; therefore special or administrative funds of this nature have been added to provincial ordinary account in the tables of this Section.

Fiscal periods are as nearly coincident as possible in view of the variations in provincial fiscal year-ends prior to the 1951 fiscal year; as of 1952 the fiscal years of all provinces end on Mar. 31. Figures for Newfoundland are included from 1949, for Yukon Territory from 1950, and for the Northwest Territories from 1955.

Subsection 1.—Revenue and Expenditure of Provincial Governments

The figures of revenue and expenditure presented in this Subsection do not agree with those given in Tables 1 and 2, pp. 1087-1088, mainly because of differences in the methods used to compute net figures and because of the slightly different classification of items. Net general revenue as shown in Tables 21 and 22 is achieved by deducting from gross general (ordinary and capital) revenue (a) all institutional revenue, (b) revenue in the form of interest, premium, discount and exchange, (c) grants-in-aid and shared-cost contributions, and (d) all capital revenue. These revenues are then offset against the related functions of expenditure to arrive at net general (ordinary and capital) expenditure, shown in Tables 21 and 23.

The following statement gives some indication of the increase in the revenue collected and services rendered by the provincial governments in 1953 and 1955 compared with 1949, the year that Newfoundland entered Confederation.

<i>Item</i>	<i>1949</i>	<i>1953</i>	<i>1955</i>
<i>(Millions of dollars)</i>			
NET GENERAL REVENUE—			
Taxes—			
Corporation income tax.....	106	49	54
Motor fuel and fuel oil tax.....	139	224	269
General sales tax.....	62	108	149
Other taxes.....	111	126	193
Federal Tax Rental Agreements.....	80	309	320
Privileges, Licences and Permits—			
Motor vehicle.....	58	88	114
Natural resources.....	82	195	257
Other.....	38	48	51
Liquor profits.....	107	125	139
Other.....	58	64	68
TOTALS, NET GENERAL REVENUE.....	841	1,336	1,614
NET GENERAL EXPENDITURE—			
Transportation and communications.....	254	353	448
Health and social welfare.....	223	313	381
Education.....	160	234	333
Debt charges (excluding debt retirement).....	52	53	55
Other.....	187	305	358
TOTALS, NET GENERAL EXPENDITURE.....	876	1,258	1,575

21.—Gross and Net Revenue and Expenditure of Provincial Governments, Years Ended Mar. 31, 1954-56

NOTE.—Figures are adjusted to achieve interprovincial comparability.

Province or Territory	1954	1955	1956	1954	1955	1956
	GROSS ORDINARY REVENUE			GROSS ORDINARY EXPENDITURE		
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	35,632	37,865	39,106	33,481	37,430	40,838
Prince Edward Island.....	8,336	8,870	8,845	6,831	7,447	8,704
Nova Scotia.....	56,221	59,172	62,463	54,191	58,572	62,718
New Brunswick.....	56,657	57,142	59,245	57,528	58,328	60,575
Quebec.....	332,959	373,638	452,084	296,537	337,116	375,271
Ontario.....	402,384	436,331	472,067	409,903	444,954	508,184
Manitoba.....	67,166	69,111	72,015	59,464	57,328	61,497
Saskatchewan.....	106,491	110,002	114,316	86,379	95,761	102,511
Alberta.....	195,424	187,878	238,686	89,260	105,603	127,975
British Columbia.....	202,428	216,011	248,923	200,010	206,872	237,202
Yukon Territory.....	1,916	1,968	2,522	1,610	1,649	2,142
Northwest Territories.....	..	746	967	..	680	779
Totals.....	1,465,614	1,558,734	1,771,239	1,295,194	1,411,749	1,588,396

21.—Gross and Net Revenue and Expenditure of Provincial Governments, Years Ended Mar. 31, 1954-56—concluded

Province or Territory	1954	1955	1956	1954	1955	1956
	NET GENERAL REVENUE			NET GENERAL EXPENDITURE ¹		
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Newfoundland.....	31,641	32,851	33,534	32,802	39,086	42,419
Prince Edward Island.....	7,671	8,154	8,044	7,167	8,822	10,343
Nova Scotia.....	49,348	51,418	54,329	51,254	52,638	57,688
New Brunswick.....	49,220	50,788	52,783	47,813	50,990	54,451
Quebec.....	299,417	339,108	412,745	310,999	349,983	399,713
Ontario.....	370,897	399,058	431,802	384,215	420,999	488,932
Manitoba.....	55,822	56,706	59,349	46,702	48,552	51,940
Saskatchewan.....	98,415	99,651	102,702	85,783	96,145	100,781
Alberta.....	185,851	175,097	225,326	118,150	138,303	159,753
British Columbia.....	186,337	199,658	230,773	171,780	178,585	207,490
Yukon Territory.....	1,460	1,632	1,785	1,154	1,313	1,405
Northwest Territories.....	..	707	916	..	641	728
Totals.....	1,336,079	1,414,828	1,614,088	1,257,819	1,386,057	1,575,265

¹ Excludes debt retirement as follows: 1954, \$81,270,000; 1955, \$71,410,000; 1956, \$83,706,000.

22.—Details of Net General Revenue of Provincial Governments, Fiscal Years Ended Mar. 31, 1955 and 1956

Source	1955	1956	Source	1955	1956
	\$'000	\$'000		\$'000	\$'000
Taxes—			Other Governments—		
Corporations.....	16,306	19,601	Government of Canada—		
Income—			Share of income tax on electric		
Corporations.....	48,988	53,950	power utilities.....	7,294	7,947
Individuals.....	25,224	30,208	Subsidies.....	24,358	23,421
Property.....	7,217	7,375	Totals, Government of Canada..	31,652	31,368
Sales—			Municipalities.....	243	244
Alcoholic beverages.....	1,902	2,073	Totals, Other Governments.....	31,895	31,612
Amusements and admissions..	22,371	20,675	Government Enterprises and		
Motor fuel and fuel oil.....	240,297	269,429	Other Funds—		
Tobacco.....	13,667	15,022	Liquor profits.....	127,549	139,167
General.....	128,590	149,444	Other.....	3,450	3,458
Other commodities and services.....	4,643	4,994	Other revenue.....	683	935
Succession duties.....	40,663	72,046	Totals, excluding Non-revenue		
Other.....	16,825	19,939	and Surplus Receipts.....	1,412,729	1,611,862
Totals, Taxes.....	566,693	664,756	Non-revenue and Surplus Re-		
Federal Tax Rental Agreements...	327,954	320,310	ceipts—		
Privileges, Licences and Permits—			Refund of previous years' ex-		
Liquor control and regulation....	30,635	32,710	penditure.....	673	808
Motor vehicle.....	94,371	114,264	Repayment of advances credited		
Natural resources.....	184,833	256,905	to revenue.....	1,308	1,208
Other.....	17,421	18,256	Other.....	118	120
Totals, Privileges, Licences and			Totals, Non-revenue and Surplus		
Permits.....	327,260	422,135	Rceipts.....	2,099	2,226
Sales and Services.....	22,654	24,196	Totals, Net General Revenue..	1,414,828	1,614,088
Fines and Penalties.....	4,591	5,293			

23.—Details of Net General Expenditure of Provincial Governments, Fiscal Years Ended Mar. 31, 1955 and 1956

Function	1955	1956	Function	1955	1956
	\$'000	\$'000		\$'000	\$'000
General Government—			Education—concluded		
Executive and administrative...	50,633	56,671	Universities, colleges and other schools	61,964	70,725
Legislative.....	4,531	7,654	Education of the handicapped...	2,170	4,739
Research, planning and statistics.	526	596	Superannuation and pensions.....	8,072	11,625
Other.....	—	—	Other.....	8,200	8,305
Totals, General Government....	55,790	64,921	Totals, Education.....	274,552	332,938
Protection of Persons and Property—			Natural Resources and Primary Industries—		
Law enforcement.....	19,162	18,066	Fish and game.....	10,888	12,480
Corrections.....	18,818	20,247	Forests.....	32,295	39,992
Police protection.....	17,465	19,197	Lands: settlement and agriculture	46,054	49,302
Other.....	23,042	24,877	Minerals and mines.....	8,135	8,771
Totals, Protection of Persons and Property.....	78,487	82,387	Water resources.....	5,624	7,313
			Other.....	3,676	4,291
Transportation and Communications—			Totals, Natural Resources and Primary Industries.....	106,672	122,149
Highways, roads and bridges....	366,626	443,434	Trade and Industrial Development	7,772	8,060
Railways.....	52	51	Local Government Planning and Development.....	2,705	3,292
Telephone, telegraph and wireless	25	24	Debt Charges.....	128,288	138,523
Waterways.....	4,621	4,307	Contributions to Local Governments—		
Other.....	15	172	Shared-revenue contributions....	15,001	10,031
Totals, Transportation and Communications.....	371,339	447,988	Subsidies.....	21,054	25,702
			Other.....	617	837
Health and Social Welfare—			Totals, Contributions to Local Governments.....	36,672	36,570
Health—			Contributions to Government Enterprises.....	9,414	10,108
General.....	4,928	5,226	Other Expenditure.....	8,891	12,977
Public health.....	15,357	18,375	Totals, excluding Non-expense and Surplus Payments.....	1,448,182	1,652,557
Medical, dental and allied services.....	8,265	9,044	Non-expense and Surplus Payments—		
Hospital care.....	206,351	214,257	Advances charged to revenue....	2,975	1,066
Totals, Health.....	234,901	246,902	Refunds of previous years' revenue.....	4,079	164
			Other.....	2,231	5,184
Social Welfare—			Totals, Non-expense and Surplus Payments.....	9,285	6,414
Aid to aged persons.....	40,165	42,801	Totals, Net General Expenditure.....	1,457,467	1,658,971
Aid to blind persons.....	1,730	1,724	Less Debt Retirement included above.....	71,410	83,706
Aid to unemployed employables and unemployables....	19,586	22,057	Totals, Net General Expenditure (excluding debt retirement).....	1,386,057	1,575,265
Mothers' allowances.....	23,004	22,717			
Child welfare.....	17,168	18,150			
Labour.....	3,156	3,403			
Other.....	18,817	23,079			
Totals, Social Welfare.....	123,626	133,931			
Totals, Health and Social Welfare.....	358,527	380,833			
Recreational and Cultural Services.	9,073	11,811			
Education—					
Schools operated by local authorities.....	194,146	237,544			

Subsection 2.—Debt of Provincial Governments

Table 24 reveals a steady increase in total bonded debt despite the decreases registered in Quebec, Alberta and British Columbia in the later years. Table 25 shows that the majority of bond issues are payable in Canada only (66 p.c. in 1952, increasing to 67 p.c. in 1956) and that the portion payable in New York only increased from 12 p.c. in 1952 to 18 p.c. in 1956. Tables 26 and 27 provide details of total direct and indirect debt of provincial governments as at Mar. 31, 1955 and 1956.

24.—Gross Bonded Debt (exclusive of Treasury Bills) of Provincial Governments as at Mar. 31, 1952-55

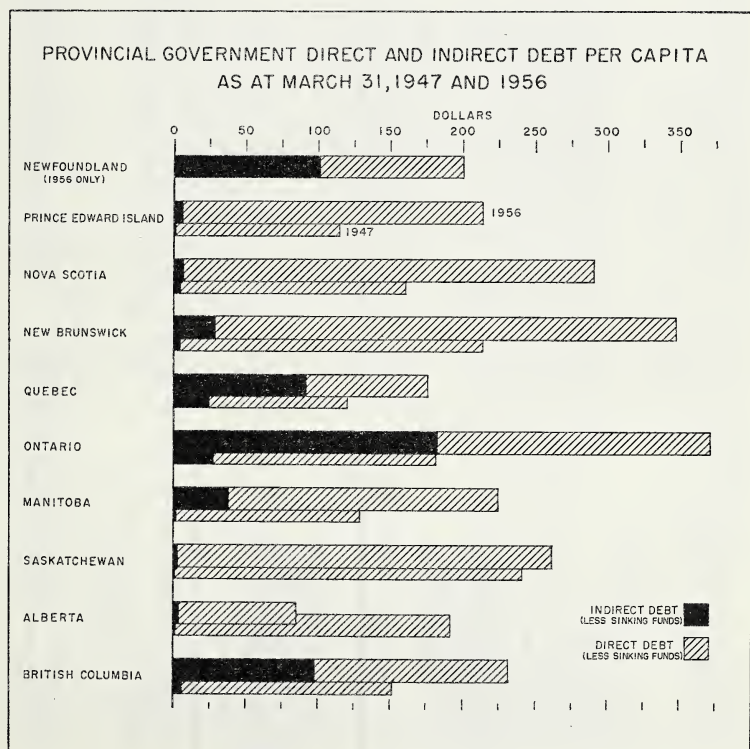
Year	Bonded Debt	Average Coupon Rate	Average Term of Issue	Year	Bonded Debt	Average Coupon Rate	Average Term of Issue
Newfoundland—	\$'000	p.c.	yrs.	Ontario—concluded	\$'000	p.c.	yrs.
1952.....	15,000	4.27	14.0	1954.....	979,419 ¹	3.59	22.2
1953.....	15,000	4.27	14.0	1955.....	1,021,237 ¹	3.57	21.6
1954.....	27,000	4.15	16.7	Manitoba—			
1955.....	43,000	3.72	18.3	1952.....	154,149	3.74	18.2
Prince Edward Island—				1953.....	161,750	3.77	18.0
1952.....	18,998	3.30	12.5	1954.....	172,560	3.71	17.9
1953.....	19,850	3.33	12.2	1955.....	179,300	3.66	18.2
1954.....	18,650	3.24	12.6	Saskatchewan—			
1955.....	19,350	3.29	12.7	1952.....	145,351	3.88	19.8
Nova Scotia—				1953.....	164,293	3.91	20.0
1952.....	190,871	3.35	17.0	1954.....	177,337	3.76	19.4
1953.....	203,496	3.45	17.1	1955.....	204,566	3.68	19.0
1954.....	208,011	3.47	17.5	Alberta—			
1955.....	220,636	3.49	18.2	1952.....	83,693	2.87	15.5
New Brunswick—				1953.....	81,043	2.87	15.7
1952.....	198,366 ¹	3.71	17.4	1954.....	78,320	2.87	16.0
1953.....	202,019	3.78	17.8	1955.....	75,517	2.86	16.2
1954.....	207,655	3.65	17.6	British Columbia—			
1955.....	217,237	3.64	17.7	1952.....	235,528	3.41	20.7
Quebec—				1953.....	222,129	3.37	20.8
1952.....	461,510 ¹	3.22	17.0	1954.....	206,174	3.31	21.0
1953.....	479,033 ¹	3.37	17.1	1955.....	192,572	3.30	21.8
1954.....	477,083 ¹	3.28	16.7	Totals—			
1955.....	467,558 ¹	3.29	17.3	1952.....	2,371,033 ¹	3.47	19.5
Ontario—				1953.....	2,560,844 ¹	3.53	19.5
1952.....	867,567 ¹	3.53	22.4	1954.....	2,552,209 ¹	3.50	19.5
1953.....	1,012,231 ¹	3.56	21.9	1955.....	2,640,973 ¹	3.50	19.5

¹ Excludes bonds assumed by the province.

**25.—Gross Bonded Debt (exclusive of Treasury Bills) of Provincial Governments by
Currency of Payments as at Mar. 31, 1952-56**

Payable in—	1952	1953	1954	1955	1956
	\$'000	\$'000	\$'000	\$'000	\$'000
Canada.....	1,450,160	1,522,623	1,623,245	1,683,017	1,766,728
London (England).....	16,643	16,643	9,587	9,587	9,587
London and Canada.....	3,499	3,499	2,974	2,974	2,974
New York (U.S.A.).....	265,025	358,255	472,973	452,825	483,325
New York and Canada.....	296,047	297,243	284,614	241,804	221,964
London, New York, and Canada.....	177,945	172,770	167,451	162,002	156,395
Totals.....	2,209,319¹	2,371,033¹	2,560,841¹	2,552,209¹	2,640,973¹

¹ Excludes bonds assumed by the provinces.



26.—Provincial Government Direct and Indirect Debt (less Sinking Funds) as at Mar. 31, 1955

Direct and Indirect Debt		Nfld.	P.E.I.	N. S.	N. B.	Que.	Ont.	Man.	Sask.	Alta.	B. C.	Yukon	Total
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Direct Debt													
Funded Debt—													
Bonded debt.....	27,000	18,650 ¹	208,011	207,655	477,133 ²	980,319 ²	172,560	177,337	78,320	206,174	—	—	2,553,159
Less sinking funds.....	2,301	3,776	26,088	42,515	103,388	130,218	40,173	23,491	—	56,784	—	—	428,734
Net bonded debt.....	24,699	14,874	181,923	165,140	373,745	850,101	132,387	153,846	78,320	149,390	—	—	2,124,425
Treasury bills.....	—	—	—	—	—	—	15,682	29,166	10,364	20,531	—	—	75,743
Net Funded Debt.....	24,699	14,874	181,923	165,140	373,745	850,101	148,069	183,012	88,684	169,921	—	—	2,200,168
Short-term treasury bills⁴													
Savings deposits and certificates.....	—	12	1,546 ⁵	—	—	—	3,350	1,500	—	—	—	—	4,850
Temporary loans and overdrafts.....	807	1,074	—	—	—	—	—	97	250	—	—	—	2,205
Accounts and Other Payables—	—	—	—	—	—	—	—	—	—	—	—	—	30,236
Trust funds and other deposits.....	3	65	2,187	318	9,712	43,329	2,079	45	—	—	10,003	71	67,812
Other.....	808	87	2,646	3,490	20,557	72,165 ⁶	1,105	2,317	6,888	12,915	50	—	123,028
Accrued interest and other accrued expenditure.....	206	162	2,019	3,412	4,108	10,803	3,580	1,631	15	1,915	—	—	27,851
Totals, Direct Debt (less Sinking Funds).....	26,535	15,108	188,775	172,360	408,122	1,004,753	138,183	188,602	95,837	194,754	121	—	2,456,150
Indirect Debt													
Guaranteed bonds or debentures.....	9,662	579	1,315	8,464	381,685	936,508	27,277	—	—	1	93,164	—	1,458,665
Less sinking funds.....	—	—	149	297	—	7,398	—	—	—	—	3,367	—	11,211
Net guaranteed bonds or debentures.....	9,662	579	1,166	8,167	381,685	929,110	27,277	—	—	1	89,797	—	1,447,454
Guaranteed bank loans.....	4,001	109	3,941	2,369	2,000	5,285	—	—	—	3,511	8,250	—	32,647
Municipal improvement assistance act loans.....	—	3	373	—	—	1,162	50	273	276	—	785	—	3,127
Other guarantees.....	28,152 ⁷	—	—	—	—	—	—	46	—	—	—	—	28,198
Totals, Indirect Debt (less Sinking Funds).....	41,815	691	5,480	10,741	384,857	934,395	27,327	3,500	3,788	95,832	—	—	1,511,426
Totals, Direct and Indirect Debt (less Sinking Funds).....	68,350	15,799	194,255	183,101	792,979	1,939,148	155,510	192,102	99,625	293,586	121	—	3,967,576
Direct debt (less sinking funds) per capita ⁸	64.41	107.67	276.39	308.89	90.29	193.86	186.32	212.15	89.90	149.24	1.21	—	157.44
Indirect debt (less sinking funds) per capita ⁸	101.49	6.40	8.02	19.25	85.15	180.28	32.19	3.94	3.55	75.73	—	—	96.88

¹ Includes \$50,000 bonds issued by the Provincial Sanatorium Commission.² Includes bonds assumed: Que. \$50,000; Ont. \$800,000.³ Having a term of two or more years.⁴ Includes trust deposits not separable from personal savings deposits.⁵ Includes \$71,536,000 net liability of the province re Province of Ontario Savings Office.⁶ Based on estimated population as at June 1, 1955 (see p. 119).⁷ Deposits in the Newfoundland Savings Bank.⁸ Based on estimated population as at June 1, 1955 (see p. 119).

27.—Provincial Government Direct and Indirect Debt (less Sinking Funds) as at Mar. 31, 1956

Direct and Indirect Debt		Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	Total
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Direct Debt													
Funded Debt—													
Bonded debt.....	43,000	19,350 ¹	220,636	217,237	467,608 ²	1,022,137 ²	179,300	204,566	75,517	192,572	—	—	2,641,023
Less sinking funds.....	3,166	4,202	31,353	47,677	110,933	152,816	45,003	18,851	—	56,455	—	—	470,456
Net bonded debt.....	39,834	15,148	189,283	169,560	356,675	869,321	134,297	185,715	75,517	136,117	—	—	2,171,467
Treasury bills ³	—	—	—	—	—	—	15,129	27,301	9,985	20,089	—	—	72,504
Net Funded Debt.....	39,834	15,148	189,283	169,560	356,675	869,321	149,426	213,016	85,502	156,205	—	—	2,243,971
Short term treasury bills ⁴	—	—	—	1,000	—	—	2,400	10,946	—	100	—	—	14,446
Savings deposits and certificates.....	—	12	1,764 ⁵	—	—	—	—	154	—	138	—	—	2,068
Temporary loans and overdrafts.....	—	—	—	562	—	—	—	—	—	—	—	—	17,578
Accounts and other payables—													
Trust funds and other deposits.....	—	186	1,964	546	11,272	50,052	2,478	339	—	—	13,149	64	80,050
Other.....	775	70	3,231	2,884	20,328	79,815 ⁶	960	2,502	7,010	13,912	827	—	132,314
Accrued interest and other accrued expenditure.....	206	155	2,128	2,906	4,341	10,785	3,702	1,879	421	1,779	—	—	28,302
Totals, Direct Debt (less Sinking Funds).....	40,827	20,401	196,606	177,458	392,616	1,023,911	153,956	228,536	93,071	185,146	891	—	2,518,729
Indirect Debt													
Guaranteed bonds or debentures.....	8,294	675	1,454	8,143	421,431	999,749	32,518	—	—	117,257	—	—	1,589,522
Less sinking funds.....	—	—	158	305	10,839	10,839	—	—	—	4,933	—	—	16,235
Net guaranteed bonds or debentures.....	8,294	675	1,296	7,838	421,431	32,518	988,910	—	—	112,324	—	—	1,573,287
Guaranteed bank loans.....	5,240	12	3,446	8,039	986	1,375	—	2,216	3,108	25,117	—	—	49,539
Municipal improvement assistance act loans.....	—	3	351	188	1,112	—	40	246	245	682	—	—	2,867
Other guarantees.....	28,637 ⁷	—	—	—	—	—	—	—	—	—	—	—	28,637
Totals, Indirect Debt (less Sinking Funds).....	42,171	690	5,003	16,065	423,529	999,285	32,558	2,462	3,354	138,123	—	—	1,654,330
Totals, Direct and Indirect Debt (less Sinking Funds).....	82,998	21,091	201,609	193,523	816,145	2,014,196	191,524	231,298	96,425	323,269	891	—	4,173,059
Direct debt (less sinking funds) per capita ⁸	98.38	206.07	282.89	319.74	84.83	189.44	187.02	259.75	82.88	132.34	74.25	—	156.63
Indirect debt (less sinking funds) per capita ⁸	101.62	6.97	7.33	28.95	91.51	183.22	38.30	2.79	2.99	98.73	—	—	102.87

¹ Includes \$50,000 bonds issued by the Provincial Sanatorium Commission.
² Includes bonds assumed: Que. \$50,000; Ont. \$900,000.
³ Having a term of two or more years.
⁴ Having a term of less than two years.
⁵ Includes trust deposits not separable from personal savings deposits.
⁶ Includes \$79,239,000 net liability of the province re Province of Ontario Savings Office.
⁷ Deposits in the Newfoundland Savings Bank.
⁸ Based on estimated population as at June 1, 1956 (see p. 119).

Section 4.—Municipal Public Finance

Subsection 1.—Municipal Assessed Valuations

Because of the lack of integrated municipal assessment systems and uniform standards for establishing values, the figures in Table 28 are not entirely comparable on an inter-provincial basis. The provinces operate under their own assessment laws which are not at all similar. Although considerable progress has been made in recent years towards uniformity and improved procedure, there is still a variation in methods, schedules and rates, not only between provinces but also between municipalities within the same province.

28.—Municipal Assessed Valuations by Province 1951-55

Province and Year	Taxable Valuations on which Taxes were Levied					Total Exemptions ²
	Real Property	Personal Property	Business	Other ¹	Total	
	\$	\$	\$	\$	\$	\$
Newfoundland³.....	..	..	..	..	..	..
P. E. Island—⁴						
1951.....	23,539,274	9,650,989	..	..	33,190,263	9,585,500
1952.....	25,767,825	9,822,300	..	..	35,590,125	9,595,500
1953.....	25,340,017	10,832,041	..	..	36,172,058	9,424,200
1954.....	26,360,725	9,075,975	2,740,000	..	38,176,700	9,954,200
1955.....	27,926,350	7,717,375	2,618,500	..	38,262,225	9,601,700
Nova Scotia—						
1951.....	223,083,830	49,077,698	13,704,315	4,582,280	290,448,123	121,862,179
1952.....	240,575,423	55,167,734	14,315,320	4,745,615	314,804,092	135,475,897
1953.....	253,698,529	60,127,611	14,499,605	4,983,895	333,309,640	143,777,931
1954.....	271,199,091	63,701,457	14,908,191	5,281,870	355,090,609	157,235,737
1955.....	302,684,165	64,891,147	15,386,810	5,610,133	388,572,255	166,253,855
New Brunswick—						
1951.....	277,823,120 ⁵	57,940,014	20,084,431	5,549,813	361,397,378	..
1952.....	304,672,416 ⁵	66,139,670	18,448,868	7,792,704	397,053,658	..
1953.....	308,956,073 ⁵	71,464,255	20,959,848	6,382,674	407,762,850	..
1954.....	318,433,006	76,626,530	21,159,426	6,760,076	422,979,038	..
1955.....	331,987,466	80,409,931	21,473,469	5,559,577	439,430,443	..
Quebec—						
1951.....	3,667,164,730	...	..	—	3,667,164,730	1,020,186,968
1952.....	3,868,454,172	...	..	—	3,868,454,172	1,110,220,252
1953.....	4,090,775,764	...	..	—	4,090,775,764	1,194,152,084
1954.....	4,726,504,000	...	..	—	4,726,504,000	1,273,290,000
1955.....	..	...	..	..	..	..
Ontario—						
1951.....	3,883,874,441	...	526,167,093	—	4,410,041,534	873,847,077
1952.....	4,253,111,819	...	520,867,384	—	4,773,979,203	913,310,338
1953.....	4,474,083,569	...	569,507,055	—	5,043,590,624	952,468,395
1954.....	5,434,371,824	...	664,790,110	—	6,099,161,934	1,127,540,653
1955.....	5,841,744,380	...	725,727,912	—	6,567,472,292	1,156,729,940
Manitoba—						
1951.....	588,596,298	6,841,122	25,064,239	—	620,501,659	156,258,385
1952.....	615,894,060	6,513,999	27,614,244	—	650,022,303	154,354,005
1953.....	643,648,796	6,903,165	29,787,151	—	680,339,112	155,561,511
1954.....	671,876,270	6,085,215	29,051,952	—	707,013,437	116,780,527 ⁶
1955.....	732,018,185	7,791,139	30,483,497	—	770,292,821	130,516,718 ⁶
Saskatchewan—						
1951.....	881,911,929	...	46,341,360	61,320	928,314,609	477,649,877
1952.....	894,296,222	...	46,957,456	27,100	941,280,778	491,314,850
1953.....	916,097,534	...	48,291,955	13,470	964,402,959	496,281,834
1954.....	938,321,680	...	49,150,958	26,540	987,499,178	515,084,849
1955.....	963,424,877	...	49,896,190	15,940	1,013,337,007	525,436,711

For footnotes, see end of table.

28.—Municipal Assessed Valuations by Province 1951-55—concluded

Province and Year	Taxable Valuations on which Taxes were Levied					Total Exemptions ²
	Real Property	Personal Property	Business	Other ¹	Total	
	\$	\$	\$	\$	\$	\$
Alberta—						
1951.....	803,411,739	47,376,105	29,033,624	—	879,821,468	91,290,874
1952.....	895,586,606	58,114,430	33,790,852	—	987,491,888	106,461,418
1953.....	926,516,030	61,890,088	39,137,993	—	1,027,544,111	117,878,447
1954.....	1,063,331,344	44,209,858	45,464,240	—	1,153,005,442	131,683,771
1955.....	1,147,348,403	46,165,518	50,565,691	—	1,244,079,612	175,427,183
British Columbia—						
1951.....	658,828,264	...	..	—	658,828,264	249,473,826
1952.....	712,927,512	...	..	—	712,927,512	266,362,640
1953.....	771,129,623	...	..	—	771,129,623	289,534,414
1954.....	842,093,330	...	..	—	842,093,330	304,157,254
1955.....	1,044,040,275	...	..	—	1,044,040,275	356,786,750

¹ Includes the following: N.S.—household tax, Halifax; N.B.—occupancy tax, Fredericton, and rentals tax, Moncton; Sask.—special franchise. ² Total of valuations assessed but exempt from taxation. Excludes exempt property not assessed. ³ Taxes are levied on rental values in some municipalities using a property base.

⁴ Includes estimated values for some municipalities; total exemptions are incomplete. ⁵ Includes personal property tax for local improvement districts and commissions, not separable. ⁶ Excludes rural municipalities; information not available.

Subsection 2.—Municipal Taxation

Table 29 shows the local taxes levied by municipalities and by some school authorities in the years 1951-55 and the total taxes outstanding at the end of those years.

29.—Municipal Taxation by Province 1951-55

Province and Year	Tax Levy	Tax Collections, Current and Arrears		Taxes Receivable, Current and Arrears	Property Acquired for Taxes	Total Taxes Receivable and Property Acquired for Taxes	
		Total	P.C. of Levy			Total	P.C. of Levy
	\$	\$		\$	\$	\$	
Newfoundland—							
1951.....	1,453,917	1,347,540	92.7	404,946	...	404,946	27.9
1952.....	1,767,602	1,630,887	92.3	515,489	...	515,489	29.2
1953.....	1,942,294	1,938,436	99.8	593,116	...	593,116	30.5
1954.....	2,050,450	1,967,191	95.9	849,329	...	849,329	41.4
1955.....	2,318,727	..	..	966,734	...	966,734	41.7
Prince Edward Island—							
1951.....	1,073,484	997,612	92.9	288,833	..	288,833	26.9
1952.....	1,348,642	1,238,427	91.8	351,642	..	351,642	26.1
1953.....	1,409,941	1,277,892	90.6	361,961	..	361,961	25.7
1954.....	1,534,079	1,412,203	92.1	411,148	..	411,148	26.8
1955.....	1,717,709	1,582,313	92.1	468,634	..	468,634	27.3
Nova Scotia—							
1951.....	16,531,193	15,899,368	96.2	4,702,645	175,781	4,878,426	29.5
1952.....	19,250,594	18,837,622	97.9	4,917,966	169,157	5,087,123	26.4
1953.....	20,122,459	19,345,162	96.1	5,575,087	169,837	5,744,924	28.5
1954.....	21,468,273	21,130,777	98.4	5,909,465	156,616	6,066,081	28.3
1955.....	22,666,638	22,056,911	97.3	6,320,917	161,492	6,482,409	28.6
New Brunswick—							
1951.....	12,579,650	12,116,729	96.3	4,207,475	89,148	4,296,623	34.2
1952.....	15,181,021	14,143,016	93.2	4,416,044	74,435	4,490,479	29.6
1953.....	17,106,221	15,501,974	90.6	5,518,178	66,083	5,584,261	32.6
1954.....	18,023,827	17,370,430	96.4	6,133,302	69,742	6,203,044	34.4
1955.....	19,143,691	18,362,635	95.9	6,899,848	84,505	6,984,353	36.5

29.—Municipal Taxation by Province 1951-55—concluded

Province and Year	Tax Levy	Tax Collections, Current and Arrears		Taxes Receivable, Current and Arrears	Property Acquired for Taxes	Total Taxes Receivable and Property Acquired for Taxes	
		Total	P.C. of Levy			Total	P.C. of Levy
	\$	\$		\$	\$	\$	
Quebec—							
1951.....	143,689,638	..	..	23,091,184	3,554,166	26,645,350	18.5
1952.....	159,005,705	..	..	20,976,477	2,806,924	23,783,401	15.0
1953.....	173,944,681	..	..	23,439,993	2,386,282	25,826,275	14.8
1954.....	196,500,000	..	..	..	..	..	..
1955.....	..	..	..	..	..	..	..
Ontario—							
1951.....	228,919,382	221,230,840	96.6	21,948,812	4,678,915	26,627,727	11.6
1952.....	263,196,643	259,438,790	98.6	24,764,795	4,459,226	29,224,021	11.1
1953.....	283,132,586	279,738,359	98.8	27,289,109	3,881,638	31,170,747	11.0
1954.....	309,416,966	302,866,691	97.9	32,767,740	3,486,079	36,253,819	11.7
1955.....	339,691,118	335,933,305	98.9	35,873,937	3,302,191	39,176,128	11.5
Manitoba—							
1951.....	36,415,815	34,735,950	95.4	7,995,116	3,584,765	11,579,881	31.8
1952.....	39,280,255	37,398,604	95.2	8,908,189	3,247,678	12,155,867	30.9
1953.....	40,669,833	38,464,628	94.6	10,415,741	3,017,461	13,433,202	33.0
1954.....	43,499,288	40,677,542	93.5	9,119,269	2,904,701	12,023,970	27.6
1955.....	46,487,706	44,419,338	95.6	10,461,142	2,771,769	13,232,911	28.5
Saskatchewan—¹							
1951.....	39,591,746	37,655,710	95.1	12,937,436	8,497,767	21,435,203	54.1
1952.....	43,067,367	43,218,103	100.3	11,369,397	7,565,541	18,934,938	44.0
1953.....	49,041,219	47,162,730	96.2	11,521,577	7,005,869	18,527,446	37.8
1954.....	53,875,358	46,876,949	87.0	16,958,545	6,723,851	23,682,396	43.9
1955.....	56,999,901	52,154,909	91.5	22,037,949	6,714,365	28,752,314	50.4
Alberta—							
1951.....	46,065,178	44,066,024	95.7	13,022,860	10,356,788	23,379,648	50.8
1952.....	53,079,124	52,560,222	99.0	13,193,743	9,756,823	22,950,566	43.2
1953.....	58,289,130	56,714,031	97.3	14,403,972	9,562,383	23,966,355	41.1
1954.....	65,024,272	60,590,523	93.2	18,345,085	9,586,447	27,931,532	43.0
1955.....	65,772,116	64,625,302	98.2	19,345,724	9,128,513	28,474,237	43.3
British Columbia—							
1951.....	43,190,910	42,746,414	99.0	3,616,090	5,679,215	9,295,305	21.5
1952.....	48,577,199	48,396,892	99.6	3,883,621	5,314,659	9,198,280	18.9
1953.....	52,888,558	52,726,801	99.7	4,199,767	4,981,035	9,180,802	17.4
1954.....	60,227,522	59,831,650	99.3	4,705,012	5,625,895	10,330,907	17.2
1955.....	66,118,663	66,231,736	100.2	4,845,230	5,264,430	10,109,660	15.3

¹ Excludes certain provincial and other special taxes (see text following this table).

Because of the considerable differences in the division of responsibility for services between the provincial governments and their respective municipalities, extreme caution should be exercised in using the figures in Table 29 as a basis for interprovincial comparisons of the relative burden of municipal taxation. Also, in Saskatchewan municipalities are required to levy certain taxes for and on behalf of the provincial government and for

other special purposes for which there is no comparable situation in other provinces. The amounts of such taxes excluded in the Saskatchewan municipal levies in Table 29 are as follows:—

<i>Tax</i>	1951	1952	1953	1954	1955
SASKATCHEWAN—	\$	\$	\$	\$	\$
Public revenue.....	1,830,314	1,845,949	...	...	...
Hail.....	1,111,465	2,069,074	2,863,832	2,522,027	2,872,218
Telephone.....	760,610	814,269	863,634	900,545	904,568
Drainage.....	13,157	11,813	6,794	7,368	7,593
TOTALS.....	3,715,546	4,741,105	3,734,260	3,429,940	3,784,379

Subsection 3.—Municipal Debt

Tables 30 and 31 set out the direct and indirect debt of local governments for the years 1954 and 1955. The amounts shown include debt incurred by municipalities for general purposes, schools and utilities, as well as debenture debt incurred directly by utilities, school authorities and certain special areas organized to provide specific local services.

Comparison with debt figures for previous years indicates that there has been a sustained upswing in municipal borrowing since 1946, largely because civic growth has increased demand for services, but also, to some extent, attributable to the inflationary factor.

30.—Debt of Municipal and School Corporations by Province for their Fiscal Years Ended in 1954

NOTE.—Figures shown are compiled from published reports of provincial Departments of Municipal Affairs, auditor reports and financial statements of municipalities, and information secured from other official sources.

Direct and Indirect Debt	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick
	\$'000	\$'000	\$'000	\$'000
Direct Debt (less Sinking Funds).....	7,337	5,226	59,836	60,064
Debenture debt.....	6,723	4,780	62,493	59,801
Less sinking funds.....	307	1,028	9,074	6,533
Net Debenture Debt.....	6,416	3,752	53,419	53,268
Temporary loans and bank overdrafts.....	23	1,208	2,190	3,683
Accounts payable and other liabilities.....	898	266	4,227	3,113
Indirect Debt (less Sinking Funds).....	..	—	898	3,719
Guaranteed bonds, debentures, etc.....	..	—	1,141	3,719
Guaranteed bank loans.....	..	—	—	—
Less sinking funds.....	..	—	243	—
Grand Totals.....	7,337	5,226	60,734	63,783
	Quebec	Ontario	Manitoba	Saskatchewan
	\$'000	\$'000	\$'000	\$'000
Direct Debt (less Sinking Funds).....	771,675	844,655	82,940	72,487
Debenture debt.....	680,812 ¹	730,549	83,624	59,855
Less sinking funds.....	17,691	5,274	14,851	6,852
Net Debenture Debt.....	673,121	725,275	68,773	53,003
Temporary loans and bank overdrafts.....	35,025	50,093 ²	7,378	5,777
Accounts payable and other liabilities.....	63,529	69,287 ²	6,789	13,707
Indirect Debt (less Sinking Funds).....	431	9,553	1,272	..
Guaranteed bonds, debentures, etc.....	—	9,943	1,272	..
Guaranteed bank loans.....	431	—	—	..
Less sinking funds.....	—	390	—	..
Grand Totals.....	772,106	854,208	84,212	72,487

For footnotes, see end of table, p. 1118.

30.—Debt of Municipal and School Corporations by Province for their Fiscal Years Ended in 1954—concluded

Direct and Indirect Debt	Alberta	British Columbia	Totals	
			1953*	1954
	\$'000	\$'000	\$'000	\$'000
Direct Debt (less Sinking Funds)	226,802	208,641	2,041,146	2,339,663
Debenture debt.....	194,013	220,052	1,845,491 ¹	2,112,702
Less sinking funds.....	1,294	26,051	92,482	88,955
Net Debenture Debt.....	192,719	194,001	1,753,009	2,023,747
Temporary loans and bank overdrafts.....	7,869	2,344	96,050	115,590
Accounts payable and other liabilities.....	26,214	12,296	192,087	200,326
Indirect Debt (less Sinking Funds)	364	3	17,138	16,240
Guaranteed bonds, debentures, etc.....	—	16	17,079	16,091
Guaranteed bank loans.....	364	—	874	795
Less sinking funds.....	—	13	815	646
Grand Totals	227,166	208,644	2,058,284	2,355,903

¹ Includes \$42,930,000 debentures of the Montreal Transportation Commission, including those of the Montreal Tramways Company, guaranteed by the City of Montreal, of which \$973,000 were held by the Commission in the Sinking Fund. ² Excludes current liabilities of schools and liabilities of other local boards and commissions but includes in lieu thereof amounts due by municipalities to such schools and other local authorities; information required to make the necessary eliminations on this account is not available from published reports.

31.—Debt of Municipal and School Corporations by Province for their Fiscal Years Ended in 1955

NOTE.—Figures shown are compiled from published reports of provincial Departments of Municipal Affairs, auditor reports and financial statements of municipalities and information secured from other official sources.

Direct and Indirect Debt	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick
	\$'000	\$'000	\$'000	\$'000
Direct Debt (less Sinking Funds)	11,508	5,935	61,314	65,060
Debenture debt.....	10,765	5,985	62,902	63,967
Less sinking funds.....	388	1,156	8,225	6,361
Net Debenture Debt.....	10,377	4,829	54,677	57,606
Temporary loans and bank overdrafts.....	91	837	2,141	3,529
Accounts payable and other liabilities.....	1,040	269	4,496	3,925
Indirect Debt (less Sinking Funds).....	..	—	856	3,757
Guaranteed bonds, debentures, etc.....	..	—	1,129	3,757
Guaranteed bank loans.....	..	—	—	—
Less sinking funds.....	..	—	273	—
Grand Totals	11,508	5,935	62,170	68,817
	Quebec	Ontario	Manitoba	Saskatchewan
	\$'000	\$'000	\$'000	\$'000
Direct Debt (less Sinking Funds)	855,212	935,804	92,764	85,856
Debenture debt.....	776,169 ¹	809,026	91,899	71,267
Less sinking funds.....	17,146	3,721	15,818	8,275
Net Debenture Debt.....	759,023	805,305	76,081	62,992

For footnote, see end of table.

**31.—Debt of Municipal and School Corporations by Province for their Fiscal Years
Ended in 1955—concluded**

Direct and Indirect Debt	Quebec	Ontario	Manitoba	Saskatchewan
	\$'000	\$'000	\$'000	\$'000
Temporary loans and bank overdrafts.....	32,777	61,837 ²	9,585	8,862
Accounts payable and other liabilities.....	63,412	68,662 ²	7,098	14,002
Indirect Debt (less Sinking Funds).....	332	8,744	1,233	—
Guaranteed bonds, debentures, etc.....	—	8,834	1,233	—
Guaranteed bank loans.....	332	—	—	—
Less sinking funds.....	—	90	—	—
Grand Totals.....	855,544	944,548	93,997	85,856
	Alberta	British Columbia	Totals	
			1954	1955
	\$'000	\$'000	\$'000	\$'000
Direct Debt (less Sinking Funds).....	261,042	272,678	2,339,663	2,647,173
Debenture debt.....	230,717	285,730	2,112,702 ¹	2,408,427
Less sinking funds.....	1,566	30,264	88,955	92,920
Net Debenture Debt.....	229,151	255,466	2,023,747	2,315,507
Temporary loans and bank overdrafts.....	5,827	2,245	115,590	127,731
Accounts payable and other liabilities.....	26,064	14,967	200,326	203,935
Indirect Debt (less Sinking Funds).....	—	1	16,240	14,923
Guaranteed bonds, debentures, etc.....	—	16	16,091	14,969
Guaranteed bank loans.....	—	—	795	332
Less sinking funds.....	—	15	646	378
Grand Totals.....	261,042	272,679	2,355,903	2,662,096

¹ Includes \$41,490,000 debentures of the Montreal Transportation Commission, including those of the Montreal Tramways Company, guaranteed by the City of Montreal, of which \$921,000 were held by the Commission in the sinking fund.

² Excludes current liabilities of schools and liabilities of other local boards and commissions but includes in lieu thereof amounts due by municipalities to such schools and other local authorities; information required to make the necessary eliminations on this account is not available from published reports.

CHAPTER XXV.—NATIONAL ACCOUNTS AND CANADA'S INTERNATIONAL INVESTMENT POSITION

CONSPECTUS

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SECTION 1. NATIONAL ACCOUNTS.....	1120	SECTION 2. CANADA'S INTERNATIONAL INVESTMENT POSITION.....	1127

NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Section 1.—National Accounts*

The national accounts constitute a set of accounting summaries for the nation as a whole and portray economic activity in terms of transactions taking place between different sections of the economy. By combining and summarizing these operations into their various classes, information may be obtained on the functioning of the economy which is of particular interest to governments concerned with problems of full employment, taxation and prices, and to businessmen concerned with programs of investment and marketing.

This measurement of the nation's output is in terms of established market prices; hence it is necessary to keep in mind that the value of the nation's production may change because of price variations as well as increase or decrease in volume of output.

Data are available showing volume changes in gross national expenditure in addition to the value figures. Gross national expenditure is shown in Table 3 in constant dollars (i.e., in terms of 1949 prices). Because the gross national expenditure equals the gross national product, these data also reflect volume changes in the production of goods and services as measured by the gross national product. For all other tables the data are expressed in current dollars so that year-to-year changes must be considered in relation to price changes over the period.

National accounts calculated on a quarterly basis are a logical extension of the annual national accounts and have been published since 1953. However, their preparation on a reliable and analytically useful basis is rather more difficult because of the scarcity of quarterly data, special problems arising from the measurement of farm production and problems in connection with seasonal variation.

The tables in this Section cover the more important aspects of the national income analysis in annual terms. Tables 1 and 2 show the main aggregates of national income, gross national product, gross national expenditure and their components and other tables are included to show the source and disposition of personal income, government revenue and expenditure and personal expenditure on consumer goods and services.

National income figures from 1926 have been revised since the publication of the 1956 Year Book. The complete new series is published in DBS bulletin *National Accounts, Income and Expenditure, 1926-1956*, which contains also a review of economic trends during that period.

National Income.—Net national income at factor cost measures the current earnings of Canadian factors of production (i.e., land, labour, capital) from productive activity. It includes wages and salaries, profits, interest, net rent and net income of farm and non-farm unincorporated business.

* Prepared in the Research and Development Division, Dominion Bureau of Statistics.

Gross National Product.—Gross national product, by totalling all costs arising in production, measures the market value of all final goods and services produced in the current period by Canadian factors of production. It is equal to national income plus net indirect taxes (indirect taxes less subsidies), plus capital consumption allowances and miscellaneous valuation adjustments.

Personal Income.—Personal income is the sum of current receipts of income whether or not these receipts represent earnings from production. It includes transfer payments from government such as family allowances, unemployment insurance benefits, and war service gratuities, in addition to wages and salaries, net income of unincorporated business, interest and dividends and net rental income of persons. It does not include undistributed profits of corporations and other elements of the national income not paid out to persons.

Gross National Expenditure.—Gross national expenditure measures the same aggregate as gross national product, namely, total production of final goods and services at market prices, by tracing the disposition of production through final sales to persons, to governments, to business on capital account (including changes in inventories) and to non-residents (exports). Imports of goods and services, including net payments of interest and dividends to non-residents, are deducted since the purpose is to measure only Canadian production.

Economic Activity in 1955 and 1956

Gross National Product and National Income.—In the year 1955 there was a sharp recovery from the mild contraction in economic activity that characterized the period mid-1953 to mid-1954. Output of goods and services, which was beginning to rise in the latter part of 1954, expanded rapidly throughout 1955, and for the year as a whole was approximately 9 p.c. higher than in 1954. The upswing lifted the gross national product from \$24,871,000,000 in 1954 to \$27,070,000,000 in 1955. With prices virtually unchanged, this increase represented the largest gain of any postwar year in the volume of production.

The expansion of output in the various industrial groups was widely dispersed and substantial in size. Manufacturing output showed an increase of 7 p.c., with relatively large increases in almost all those sub-groups that had been affected by the contraction of activity in 1953-54 (iron and steel products, electrical apparatus and supplies, and textiles). Sharp gains were also recorded in wood products, non-ferrous metal products and non-metallic mineral products.

These developments in production were associated with an increase of 4 p.c. in the number of persons with jobs in the non-farm sector. The expansion in employment, together with higher average earnings, raised labour income to \$13,215,000,000, 6 p.c. higher than in 1954.

Accrued net income of farm operators from farm production rose from \$1,017,000,000 to \$1,261,000,000, largely as a result of a better crop of grain; farm cash income, however, was slightly lower than in the previous year. Net income of non-farm unincorporated business rose 8 p.c., with the increases concentrated in construction and retail trade.

Corporate profits, which had been declining year by year from their postwar peak in 1951, rose to a new high of \$2,489,000,000, a gain of 27 p.c. Other investment income continued to rise.

Sustained expansion in economic activity in 1956 again raised the level of gross national product, which reached a total of \$30,098,000,000, 11 p.c. higher than in 1955. Prices resumed their upward trend and the gain in the physical volume of output was 7 p.c.—not much short of the 9 p.c. achieved in 1955.

The most striking increases in production in non-agricultural industries occurred in transportation, mining and construction. In manufacturing industries the increase was about 6 p.c., with an 8-p.c. increase in durable goods industries and a 4.5-p.c. increase in non-durables; gains were relatively large in those industries manufacturing producer and consumer durables, construction materials, and basic export products.

This expansion in output was associated with a 5-p.c. increase in the number of persons with jobs in the non-agricultural sector of the economy. The magnitude of this increase was accounted for by a drop in unemployment, an unusually large growth in the labour force and a further decline in farm employment. Higher average earnings, up 5 p.c., were somewhat more important than increased employment in raising labour income to \$14,719,000,000, an increase of 11 p.c. over the previous year.

Accrued net income of farm operators from farm production in 1956 was \$1,468,000,000, a gain of 16 p.c. over the previous year; the rise in farm cash income was somewhat smaller. As in 1955, the rise mainly reflected a larger grain crop. Net income of non-farm unincorporated business was higher by 8 p.c.; retail trade and construction were again prominent among the industries registering increases.

Corporate profits were \$2,802,000,000 in 1956 compared with \$2,489,000,000 in 1955, though the rate of increase was significantly lower than in the earlier year. Other investment income was also higher.

1.—National Income and Gross National Product 1939-56

NOTE.—Figures in this table have been completely revised since the publication of the 1956 Year Book.

(Millions of dollars)

Item	1939	1944	1946	1950 ¹	1953	1954	1955	1956
Wages, salaries and supplementary labour income.....	2,601	4,998	5,487	8,629	12,110	12,432	13,215	14,719
Military pay and allowances.....	32	1,068	340	137	309	367	394	424
Corporation profits before taxes.....	521	1,081	1,269	2,118	2,294	1,963	2,489	2,802
Rent, interest, and miscellaneous investment income.....	301	589	581	890	1,329	1,511	1,748	1,964
Accrued net income of farm operators from farm production.....	362	1,088	1,056	1,322	1,575	1,017	1,261	1,468
Net income of non-farm unincorporated business.....	475	811	1,072	1,439	1,688	1,656	1,793	1,937
Inventory valuation adjustment.....	-56	-52	-254	-374	-11	86	-217	-260
Net National Income at Factor Cost...	4,236	9,583	9,551	14,161	19,294	19,032	20,683	23,054
Indirect taxes less subsidies.....	734	1,112	1,270	2,000	2,911	2,947	3,238	3,601
Capital consumption allowance and miscellaneous valuation adjustments.....	637	1,005	998	1,913	2,673	2,905	3,163	3,492
Residual error of estimate.....	29	150	31	-68	142	-13	-14	-49
Gross National Product at Market Prices.....	5,636	11,850	11,850	18,006	25,020	24,871	27,070	30,098

¹ Newfoundland included from 1950.

Gross National Expenditure.—The major expansionary force in the economy in 1955 was consumer expenditure, together with housing; these two closely related sectors accounted for about two-thirds of the increase in gross national expenditure in that year. At the same time, expansionary influences were present in every other major segment of demand.

Personal income was up 8 p.c. and, since consumer prices remained virtually unchanged, there was a parallel rise in real income; on a per capita basis, the gain was the largest of any postwar year. Consumer expenditure also rose 8 p.c., with an especially large increase in purchases of durables, which were up 16 p.c. Gains were also widespread in non-durable groups and in services. The rise in personal income, together with a larger supply of mortgage funds, was reflected in rising expenditures on housing; 138,366 housing units were started during the year and 127,929 units completed, representing substantial increases

over the previous year. Business outlays on non-residential construction and on machinery and equipment also continued their upward course, rising 11 p.c. and 6 p.c. respectively. Together they amounted to \$3,832,000,000, equal to their previous high in 1953.

The rising level of activity prompted a shift to accumulation of business inventories, in contrast to liquidation in 1954, and the larger grain crop led to increased investment in farm inventories. The shift in inventories alone accounted for about one-fifth of the increase in gross national product. Government expenditure on goods and services rose to \$4,780,000,000, 7 p.c. higher than in the previous year. While defence expenditures were slightly higher, most of the increase was attributable to larger capital outlays and to higher wages and salaries.

Exports of goods and services rose to \$5,764,000,000 in 1955, an increase of 12 p.c. over 1954. The renewed up-turn of activity in the United States and continued expansion in overseas countries accounted for the strength of demand in foreign markets. The increase in imports of goods and services, particularly evident in the latter part of the year, was 16 p.c., to a total of \$6,443,000,000. Thus the deficit on current account of \$679,000,000 was substantially in excess of the \$427,000,000 recorded in 1954. Export prices were higher by 4 p.c. and import prices by about 2 p.c., so that there was a slight improvement in Canada's terms of trade with other countries.

Economic activity continued to expand in 1956, and of paramount importance in that expansion was the extraordinarily large increase in business outlays for plant and equipment, which accounted for more than 40 p.c. of the rise in the nation's total spending. The increases in consumer expenditure, housing and exports approximated those of 1955 in percentage terms.

Business outlays for plant, machinery and equipment amounted to \$5,103,000,000; the advance of 33 p.c., in value terms, over 1955 was the largest percentage increase in any postwar year except 1947. After taking account of the advance in prices, which was especially marked in the investment goods sector, the rise in physical terms was 25 p.c. The gains were heavily concentrated in projects related to resource development, fuel and energy requirements and the processing of primary commodities.

At \$1,526,000,000, outlays on housing were higher in 1956 than in 1955 by 11 p.c.; taking into consideration the rise in prices, the increase in volume was 7 p.c. Higher costs and more limited supply of mortgage funds caused falling off in the rate of housing starts during the year, and it was the carryover of houses under construction at the end of 1955 and early 1956 that contributed to the record of 135,700 completions in 1956.

The high and rising level of final demand, and possibly also expectations of higher prices, made for heavy investment in business inventories. Investment in inventories, added to business outlays for plant and equipment, accounted for well over half the increase in the nation's total spending in 1956.

Personal expenditure on consumer goods and services, amounting to \$18,697,000,000, was up 7 p.c. in value but somewhat less in volume. This increase, which was associated with an 11-p.c. rise in personal income, was well distributed over the various categories, but the rise in purchases of durables was much less pronounced than in 1955.

Government expenditure on goods and services was \$5,266,000,000, 10 p.c. higher than in 1955. The increase was mainly accounted for by larger capital outlays, notably by provincial governments, and by larger wage and salary payments.

Continuing strength of foreign demand, greater productive capacity in the export industries, and a decided improvement in sales of wheat resulted in exports of goods and services valued at \$6,339,000,000. This was also a 10-p.c. increase, and higher prices accounted for a little less than one-third of that increase.

Imports of goods and services were \$7,697,000,000 in 1956, 19 p.c. higher than in 1955; this increase represented a larger volume of goods and services sold. The heavy demands of the huge investment program were reflected in relatively large increases in machinery and equipment and in basic materials related thereto; for example, imports of iron and its products advanced 39 p.c.

The deficit on international current account climbed to \$1,358,000,000 in 1956, twice the figure for 1955.

2.—Gross National Expenditure 1939-56

NOTE.—Figures in this table have been completely revised since the publication of the 1956 Year Book.

(Millions of dollars)

Item	1939	1944	1946	1950 ¹	1953	1954	1955	1956
Personal expenditure on consumer goods and services.....	3,984	6,274	8,031	12,026	15,592	16,175	17,464	18,697
Government expenditure on goods and services.....	683	4,978	1,796	2,344	4,432	4,461	4,780	5,266
Current expenditure.....	..	..	..	1,766	3,454	3,519	3,746	4,004
Gross fixed capital formation.....	..	..	..	588	978	942	1,034	1,262
Business gross fixed capital formation.....	592	900	1,388	3,348	4,998	4,779	5,210	6,629
New residential construction.....	174	267	368	883	1,166	1,227	1,378	1,526
New non-residential construction.....	164	256	435	1,042	1,719	1,671	1,848	2,550
New machinery and equipment.....	254	377	585	1,423	2,113	1,881	1,984	2,553
Value of physical change in inventories....	282	-145	333	550	583	-130	281	815
Non-farm business inventories.....	101	-10	360	399	351	-40	102	545
Farm inventories and grain in commercial channels.....	181	-135	-27	151	232	-90	179	270
Exports of goods and services.....	1,451	3,561	3,210	4,183	5,400	5,147	5,764	6,339
Deduct: Imports of goods and services....	1,328	3,569	2,877	4,513	5,843	5,574	6,443	7,697
Residual error of estimate.....	-28	-149	-31	68	-142	13	14	49
Gross National Expenditure at Market Prices.....	5,636	11,850	11,850	18,006	25,020	24,871	27,070	30,098

¹ Newfoundland included from 1950.

3.—Gross National Expenditure in Constant (1949) Dollars 1939-56

NOTE.—Figures in this table have been completely revised since the publication of the 1956 Year Book.

(Millions of dollars)

Item	1939	1944	1946	1950 ¹	1953	1954	1955	1956
Personal expenditure on consumer goods and services.....	6,510	8,444	10,323	11,642	13,338	13,650	14,738	15,516
Government expenditure on goods and services.....	1,156	6,499	2,294	2,242	3,517	3,415	3,550	3,704
Current expenditure.....	..	..	..	1,680	2,748	2,676	2,754	2,779
Gross fixed capital formation.....	..	..	..	562	769	739	796	925
Business gross fixed capital formation.....	1,053	1,235	1,846	3,167	3,926	3,723	3,973	4,787
New residential construction.....	361	401	512	833	905	946	1,040	1,111
New non-residential construction.....	266	355	569	988	1,306	1,272	1,367	1,783
New machinery and equipment.....	427	496	777	1,346	1,715	1,605	1,566	1,893
Adjusting entry.....	-21	-17	-12	—	—	—	—	—
Change in inventories.....	699	-204	536	561	590	-216	401	751
Non-farm business inventories.....	191	5	562	398	320	-39	116	453
Farm inventories and grain in commercial channels.....	505	-252	-82	163	270	-177	285	298
Adjusting entry.....	-87	43	56	—	—	—	—	—
Exports of goods and services.....	2,885	5,168	4,115	3,999	4,809	4,616	4,960	5,313
Deduct: Imports of goods and services....	2,599	5,020	3,717	4,206	5,269	5,013	5,672	6,567

¹ Newfoundland included from 1950.

3.—Gross National Expenditure in Constant (1949) Dollars 1939-56—concluded

Item	1939	1944	1946	1950 ¹	1953	1954	1955	1956
Residual error of estimate.....	-47	-199	-40	66	-117	11	11	38
Adjusting entry.....	-121	4	-106	—	—	—	—	—
Gross National Expenditure in Constant (1949) Dollars.....	9,536	15,927	15,251	17,471	20,794	20,186	21,961	23,542
Index of gross national expenditure (1949=100).....	58.3	97.5	93.3	106.9	127.2	123.5	134.4	144.0

¹ Newfoundland included from 1950.

4.—Sources of Personal Income 1939-56

NOTE.—Figures in this table have been completely revised since the publication of the 1956 Year Book.
(Millions of dollars)

Item	1939	1944	1946	1950 ¹	1953	1954	1955	1956
Wages, salaries and supplementary labour income.....	2,601	4,998	5,487	8,629	12,110	12,432	13,215	14,719
<i>Deduct: Employer and employee contributions to social insurance and government pension funds.....</i>	<i>35</i>	<i>133</i>	<i>149</i>	<i>256</i>	<i>410</i>	<i>422</i>	<i>449</i>	<i>490</i>
Military pay and allowances.....	32	1,068	340	137	309	367	394	424
Net income received by farm operators from farm production.....	412	1,110	1,034	1,156	1,599	1,009	1,197	1,448
Net income of non-farm unincorporated business.....	475	811	1,072	1,439	1,688	1,656	1,793	1,937
Interest, dividends and net rental income of persons.....	570	741	817	1,268	1,551	1,719	1,911	2,125
Transfer payments (excluding interest)— From governments.....	229	259	1,106	1,030	1,461	1,634	1,731	1,765
Charitable contributions from corporations.....	6	11	12	25	28	26	28	30
Totals, Personal Income.....	4,290	8,865	9,719	13,428	18,336	18,421	19,820	21,958

¹ Newfoundland included from 1950.

5.—Disposition of Personal Income 1939-56

NOTE.—Figures in this table have been completely revised since the publication of the 1956 Year Book.
(Millions of dollars)

Item	1939	1944	1946	1950 ¹	1953	1954	1955	1956
Personal Direct Taxes—								
Income taxes.....	62	772	711	612	1,287	1,296	1,297	1,495
Succession duties.....	28	39	54	66	73	78	127	146
Miscellaneous taxes.....	22	27	31	62	72	63	67	79
Purchases of goods and services.....	3,984	6,274	8,031	12,026	15,592	16,175	17,464	18,697
Personal net savings.....	194	1,753	892	662	1,312	809	865	1,541
Totals, Personal Income.....	4,290	8,865	9,719	13,428	18,336	18,421	19,820	21,958

¹ Newfoundland included from 1950.

6.—Personal Expenditure on Consumer Goods and Services 1939-56

NOTE.—Figures in this table have been completely revised since the publication of the 1956 Year Book.

(Millions of dollars)

Item	1939	1944	1946	1950 ¹	1953	1954	1955	1956
Food.....	960	1,782	2,126	3,140	3,884	4,030	4,231	4,506
Tobacco and alcoholic beverages.....	228	531	710	928	1,101	1,114	1,164	1,231
Clothing and personal furnishings.....	479	941	1,169	1,528	1,844	1,826	1,900	2,021
Shelter.....	582	801	884	1,385	1,972	2,192	2,392	2,572
Household operations.....	593	744	1,016	1,544	1,999	2,104	2,308	2,480
Transportation.....	370	341	577	1,355	1,775	1,800	2,107	2,201
Personal and medical care and death expenses.....	261	379	479	745	1,012	1,091	1,157	1,221
Miscellaneous.....	511	755	1,070	1,401	2,005	2,018	2,205	2,465
Totals.....	3,984	6,274	8,031	12,026	15,592	16,175	17,464	18,697
Durable goods.....	312	323	596	1,451	2,001	1,970	2,284	2,406
Non-durable goods.....	2,186	3,772	4,829	6,711	8,199	8,373	8,879	9,552
Services.....	1,486	2,179	2,606	3,864	5,392	5,832	6,301	6,739

¹ Newfoundland included from 1950.**7.—Federal, Provincial and Municipal Government Revenue and Expenditure 1939-56**

NOTE.—Figures in this table have been completely revised since the publication of the 1956 Year Book.

(Millions of dollars)

Item	1939	1944	1946	1950 ¹	1953	1954	1955	1956
Revenue								
Direct Taxes: Persons—								
Income taxes.....	62	772	711	612	1,287	1,296	1,297	1,495
Succession duties.....	28	39	54	66	73	78	127	146
Miscellaneous taxes.....	22	27	31	62	72	63	67	79
Direct taxes: corporations.....	115	598	654	983	1,220	1,082	1,280	1,430
Withholding taxes.....	10	27	29	54	54	58	67	68
Indirect taxes.....	717	1,379	1,506	2,063	3,021	3,033	3,317	3,722
Investment Income—								
Interest.....	71	105	120	155	206	237	234	256
Profits of government business enterprises	50	262	284	316	445	450	508	563
Employer and employee contributions to social insurance and government pension funds.....	35	133	149	256	410	422	449	490
Totals, Revenue.....	1,110	3,342	3,538	4,567	6,788	6,719	7,346	8,249
Expenditure								
Purchase of goods and services.....	683	4,978	1,796	2,344	4,432	4,461	4,780	5,266
Transfer Payments—								
Interest.....	275	423	554	545	610	669	670	718
Other.....	229	259	1,106	1,030	1,461	1,634	1,731	1,765
Subsidies.....	—17	267	236	63	110	86	79	121
Surplus or deficit (on transactions relating to the National Accounts).....	—60	—2,585	—154	585	175	—131	86	379
Totals, Expenditure.....	1,110	3,342	3,538	4,567	6,788	6,719	7,346	8,249

¹ Newfoundland included from 1950.

8.—Analysis of Corporation Profits, 1939-56

NOTE.—Figures in this table have been completely revised since the publication of the 1956 Year Book.

(Millions of dollars)

Item	1939	1944	1946	1950 ¹	1953	1954	1955	1956
Corporation profits before taxes.....	521	1,081	1,269	2,118	2,294	1,963	2,489	2,802
Dividends paid to non-residents.....	177	153	205	404	317	327	395	444
Corporation profits including dividends paid to non-residents.....	698	1,234	1,474	2,522	2,611	2,290	2,884	3,246
Deduct: Corporation income tax liabilities	115	598	654	983	1,220	1,082	1,280	1,430
Excess of tax liabilities over collections.	22	-107	50	143	-149	-94	170	58
Tax collections.....	93	705	604	841	1,369	1,176	1,110	1,372
Corporation profits after taxes.....	583	636	820	1,539	1,391	1,208	1,604	1,816
Deduct: Dividends paid to non-residents..	177	153	205	404	317	327	395	444
Corporation profits retained in Canada.....	406	483	615	1,135	1,074	881	1,209	1,372
Deduct: Dividends paid to Canadian persons.....	125	123	115	358	317	284	302	330
Deduct: Charitable contributions from corporations.....	6	11	12	25	28	26	28	30
Undistributed Corporation Profits..	275	349	488	752	729	571	879	1,012

¹ Newfoundland included from 1950.

9.—Corporation Profits before Taxes (including Dividends Paid to Non-residents) by Industry 1954-56

NOTE.—Figures in this table have been completely revised since the publication of the 1956 Year Book.

(Millions of dollars)

Industry	1954	1955	1956	Industry	1954	1955	1956
Agriculture.....	15	19	19	Electric power, gas and water utilities.....	49	54	63
Forestry.....				Wholesale trade.....	151	203	258
Fishing and trapping.....				Retail trade.....	130	156	177
Mining, quarrying and oil wells	221	336	378	Finance, insurance and real estate.....	269	292	324
Manufacturing.....	1,186	1,501	1,655	Service.....	49	55	62
Construction.....	89	75	73	Totals.....	2,290	2,884	3,246
Transportation.....	81	139	174				
Storage.....	11	12	13				
Communication.....	39	42	50				

Section 2.—Canada's International Investment Position*

Exceptional increases have been occurring in the amounts of foreign capital invested in Canada. As these changes have been under way for a number of years, the accumulated amounts of investments in Canada owned by non-residents have shown a rapid rise, and the balance of Canadian indebtedness to other countries has risen even more sharply as Canadian assets abroad have increased more moderately than the liabilities. The rise in non-resident investments has been particularly pronounced in the period since 1948, having doubled from \$7,506,000,000 to \$15,400,000,000 in 1956, and the balance of international indebtedness in the same period has risen from \$3,700,000,000 to \$9,500,000,000.

* Prepared in the Balance of Payments Section, International Trade Division, Dominion Bureau of Statistics. A more extended review appears in DBS report, *Canada's International Investment Position, 1936 to 1954*, and some more recent statistics in the report, *The Canadian Balance of International Payments, 1955, and International Investment Position*.

Particularly significant is the fact that direct investments in Canadian businesses controlled in the United States and elsewhere have risen at an even greater rate than total investments and there have also been large increases in other types of investment in Canadian equities. In contrast, the increase in non-resident portfolios of Canadian Government, municipal and corporation bonds has been relatively moderate.

Investments of non-resident capital have been closely related to the high rate of growth in Canada. Large development projects have been initiated and financed by investors from other countries and the growth effects from this investment have, in turn, led to Canadian borrowing in capital markets outside of Canada. While capital inflows have been the principal source of the increased indebtedness abroad, another substantial contributor has been the earnings from non-resident-controlled branches and subsidiaries which were retained in Canada. New resource industries depending to a large extent on non-resident financing include all branches of the petroleum industry, iron ore and other mining, aluminum, nickel, pulp and paper, and chemicals. In addition, secondary industry has also benefited from non-resident investment.

Foreign Investments in Canada.—Dependence upon external sources of capital for financing in earlier periods of heavy investment activity has been characteristic of Canadian development. During the exceptional growth period that occurred before World War I the rate of increase in non-resident investment was very high and dependency upon external sources of capital was greater than in later periods. Total non-resident investments in Canada increased from an estimated \$1,232,000,000 in 1900 to \$3,837,000,000 by 1914, mainly in the form of bonded debt for railway and other expansion guaranteed by the Canadian Government. This was the period when the principal external source of capital was London, and by 1914 British investments in Canada, estimated at \$2,778,000,000, were at about their highest level. By the same date, United States investments, although they had been increasing rapidly, had only about one-third of the value of British-owned investments.

During the first part of the inter-war period the United States became the principal source of external capital, and by 1926 the United States-owned portion of Canada's international debt exceeded that owned in the United Kingdom which had not increased since 1914. Growth in United States investments in Canada continued for some years but was interrupted in the 1930's when the total was reduced by repatriations of securities and other withdrawals of capital. Increases began again in the 1940's and by the end of World War II, United States investments of \$4,990,000,000 compared with British investments of \$1,750,000,000. The latter had been reduced by wartime repatriation measures and the proceeds were used in financing British expenditures in Canada. Following the War, up to 1948, some further declines occurred in British investments in Canada but since then they have increased.

United States investments have risen each year since the end of the Second World War, particularly since 1948. Between that year and 1956 the total more than doubled. At \$11,651,000,000, United States investments in 1956 continued to represent more than three-quarters of all non-resident investments in Canada and also made up a similar ratio of the increase during this recent period. The main rise occurred in direct investments in companies controlled in the United States, which are prominent in many branches of Canadian industry. In 1956 portfolio investments in Canada owned in the United States were about one-half as high again as in 1949. A considerable part of this latter rise occurred in 1956 when large sales of new issues of securities were made in that country.

British investments in Canada totalled \$2,675,000,000 in 1956 and were at a new postwar peak which was not far below the earlier maximum levels maintained for several decades following 1914. But these investments now account for only 17 p.c. of the total non-resident investments in Canada compared with 36 p.c. at the end of 1939 before most of the wartime repatriations. The rise in British investments in Canada from the low point in 1948 was more than \$1,000,000,000 up to 1956, particularly concentrated in direct investments which have more than doubled since then and which now represent a

much larger portion of the total than in the prewar period. In absolute terms, this rise in total British investments in Canada is more than the rise in investments by all other overseas countries in the same period, although the rate of increase has been lower.

Investments of countries other than the United States and the United Kingdom reached a record total of \$1,075,000,000 at the end of 1956. Being almost three times the corresponding 1950 figure, this represents a much higher rate of increase than has occurred in either United States or British investments and large increases have taken place in portfolio holdings of securities as well as in direct investments. At 7 p.c. of the total, this group of countries, mostly in Western Europe, makes up a larger portion of total investments than ever before. About 90 p.c. of the direct investments, which totalled \$315,000,000 in 1955, also came from Western Europe; more than one-third was of Belgian origin with French and Swiss making up the next largest groups. Since then German direct investments have risen significantly.

The degree of dependence upon non-resident capital for financing Canadian investment has been relatively much less in the postwar period than in the earlier periods of exceptional expansion, even though the rise in non-resident investments has been so great. Thus, from 1950 to 1956 the net use of foreign resources amounted to about one-fifth of net capital formation in Canada, and direct foreign financing amounted to about one-third. But in the year 1956 when these ratios had increased considerably to about one-third and two-fifths respectively, they were still less than the corresponding ratios in the short period 1929 to 1930 when inter-war investment activity was at its highest point. In that period more than one-half of net capital formation was financed from outside of Canada, and in the period of heavy investment before World War I an even larger ratio of investment was financed by external capital. In considering these changes it should be noted that for a decade and a half, between 1934 and 1949, Canada was a net exporter of capital and that Canadian assets abroad have been rising over a long period.

It should also be noted that the above ratios relate to the place of non-resident investments in all spheres of development including those where Canadian sources of financing predominate such as in merchandising, agriculture, housing, public utilities, and other forms of social capital. Thus non-resident financing of industry and mining has been much higher than the over-all ratios indicate, and has provided the major portion of the capital investment in this field in the period since 1948. The most comprehensive calculation of the ratios of non-resident ownership in Canadian manufacturing, mining and petroleum is for the year 1954, and it should be noted that subsequent changes are likely to have increased non-resident ownership even more. In that year the Canadian manufacturing industry was 48 p.c. owned by non-residents but capital subject to foreign control was 54 p.c. These proportions compared with 44 p.c. and 48 p.c., respectively, as recently as at the end of 1951. In the broad field of mining, smelting and petroleum, exploration and development companies, non-resident ownership and control each amounted to 59 p.c. at the end of 1954, whereas at the end of 1951 non-resident ownership and control had amounted to 51 p.c. and 53 p.c. respectively. However, resident-owned Canadian capital continued to play a leading role in the financing of such areas of business as merchandising, railways and other public utilities. Hence non-resident ownership in the broad area of business, including industry, mining, merchandising and railways and utilities as a whole, remained just under one-third for a period of some years up to 1954 (the last year for which the calculation has been made). But, in the same years, companies subject to non-resident control increased to some extent their share of the total even in this broad area of business, a trend also evident in many subdivisions of the manufacturing and extractive industries.

The same type of analysis has been applied to investments in the petroleum industry including exploration and development, refining, merchandising, pipelines and other transportation. This industry has been the largest single recipient of capital inflows in the postwar period, accounting directly for more than one-half of the net inflow of United States capital for direct investment in Canada. By the end of 1955, investments in Canadian petroleum concerns controlled in the United States made up 74 p.c. of the

total, having increased sharply from the previous year. Another 6 p.c. of the investment was controlled in overseas countries. Investments owned in the United States and overseas were 59 p.c. and 5 p.c. respectively of the total.

Another basis of judging the place of foreign-controlled business in Canadian industry is provided by a special study of production and employment in the larger Canadian manufacturing establishments controlled in the United States. Such establishments having an investment of \$1,000,000 or more accounted for about 30 p.c. of Canadian manufacturing production in 1953 and 21 p.c. of employment in that field. These ratios in non-resident-controlled plants were considerably higher than in 1946—the previous year for which a study of this kind was made.

In some industries the proportions of production and employment in plants controlled in the United States were much higher than this. Automobiles, for example, are mainly produced in United States-controlled plants, but this is exceptional. Among other industries where well over one-half of the production is in United States-controlled firms are the smelting and refining of non-ferrous metals, petroleum refining, rubber products, and motor vehicle parts. In several major industries like electrical apparatus and supplies and non-ferrous metal products the distribution of control between Canadian and United States-controlled companies is more evenly divided. In other industries the non-resident share is large although less than one-half the total. These include pulp and paper, other paper products, chemicals, medicinal and pharmaceutical products, sheet metal products, and certain branches of the machinery industry.

There are, however, many industries where much the largest part of production is in Canadian-controlled plants. Prominent among these are such important branches of industry as primary iron and steel, and some other sub-divisions of the iron and steel industry, textiles, clothing, and divisions of the foods and beverages industry, such as bakery products, beverages, and dairy products.

10.—Estimate of the Canadian Balance of International Indebtedness as at Dec. 31, 1939-56

NOTE.—Totals are rounded and may not represent the sum of their components. They are exclusive of short-term commercial indebtedness and blocked currencies.

(Billions of dollars)

Item	1939	1945	1949	1950	1953	1954 ^r	1955	1956
Canadian Liabilities (Foreign Capital Invested in Canada)—								
Direct investments.....	2.3	2.7	3.6	4.0	6.0	6.8	7.7	8.9
Government and municipal bonds.....	1.7	1.7	1.8	2.0	2.1	2.1	1.9	2.1
Other portfolio investments.....	2.6	2.4	2.3	2.4	2.9	3.1	3.1	3.4
Miscellaneous investments.....	0.3	0.3	0.3	0.3	0.5	0.6	0.8	1.0
Totals, Non-resident Long-Term Investment in Canada.....	6.9	7.1	8.0	8.7	11.5	12.6	13.5	15.4
Equity of non-residents in Canadian assets abroad.....	0.2	0.2	0.3	0.3	0.6	0.6	0.7	0.7
Canadian dollar holdings of non-residents	0.3	0.3	0.4	0.6	0.3	0.3	0.4	0.4
Canadian short-term assets of IMF and IBRD.....	—	—	0.3	0.3	0.3	0.2	0.2	0.2
Gross Liabilities.....	7.4	7.6	8.9	9.9	12.6	13.7	14.8	16.7
United States.....	4.5	5.4	6.4	7.1	9.5	10.3	11.1	12.4
United Kingdom.....	2.6	1.8	1.8	2.0	2.2	2.3	2.5	2.9
Other countries, IMF and IBRD.....	0.3	0.4	0.7	0.8	1.0	1.0	1.2	1.4

**10.—Estimate of the Canadian Balance of International Indebtedness
as at Dec. 31, 1939-56—concluded**

Item	1939	1945	1949	1950	1953	1954 ¹	1955	1956
Canadian Assets (Canadian Capital Invested Abroad)—								
Direct investments.....	0.7	0.7	0.9	1.0	1.5	1.6	1.8	1.9
Portfolio investments.....	0.7	0.6	0.6	0.6	0.9 ¹	0.9	1.0	1.0
Government of Canada loans and advances.....	—	0.7	2.0	2.0	1.8	1.7	1.6	1.6
Government of Canada subscriptions to IMF and IBRD.....	—	—	0.4	0.4	0.4	0.4	0.4	0.4
Totals, Canadian Long-Term Investments Abroad.....	1.4	2.0	4.0	4.0	4.5	4.6	4.8	4.9
Government of Canada holdings of gold and foreign exchange.....	0.5	1.7	1.2	1.9	1.8	1.9	1.9	1.9
Other Canadian short-term assets abroad.....	—	0.1	0.1	0.1	0.3	0.4	0.3	0.5
Gross Assets.....	1.9	3.8	5.2	5.9	6.6	6.9	7.0	7.2
Government of Canada holdings of gold and foreign exchange.....	0.5	1.7	1.2	1.9	1.8	1.9	1.9	1.9
United States ²	0.9	0.9	1.1	1.1	2.0	2.1	2.2	2.5
United Kingdom ²	0.1	0.7	1.6	1.6	1.5	1.5	1.4	1.4
Other countries, IMF and IBRD.....	0.4	0.5	1.3	1.3	1.4	1.4	1.4	1.4
Canadian Net International Indebtedness—Net Liabilities.....	5.5	3.9	3.7	4.0	6.0	6.8	7.8	9.5
Government of Canada holdings of gold and foreign exchange.....	-0.5	-1.7	-1.2	-1.9	-1.8	-1.9	-1.9	-1.9
United States ²	3.6	4.6	5.3	6.0	7.5	8.2	8.9	9.9
United Kingdom ²	2.5	1.1	0.2	0.4	0.7	0.9	1.0	1.5
Other countries, IMF and IBRD.....	-0.1	-0.1	-0.6	-0.5	-0.4	-0.4	-0.2	—

¹ New series.² Exclusive of Government of Canada holdings of gold and foreign exchange.

11.—Foreign Capital Invested in Canada by Type of Investment as at Dec. 31, 1939-55

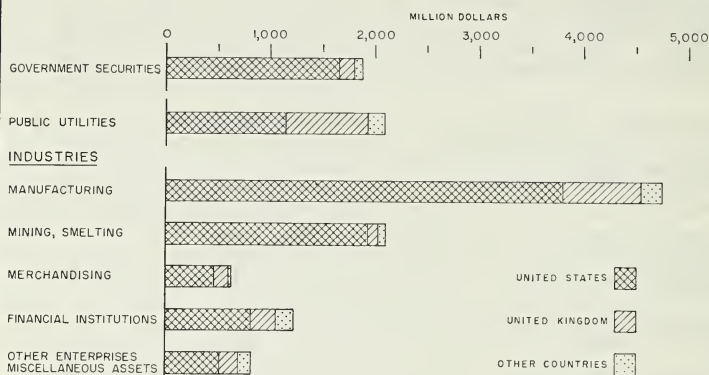
(Millions of dollars)

Type of Investment	1939	1945	1949	1950	1953	1954	1955
Government Securities—							
Federal.....	823	726	975	1,141	744	659	539
Provincial.....	536	624	534	565	930	964	888
Municipal.....	344	312	246	256	413	433	451
Totals, Government Securities.....	1,703	1,662	1,755	1,962	2,087	2,056	1,878
Public Utilities—							
Railways.....	1,871	1,599	1,445	1,446	1,424	1,428	1,360
Other.....	549	494	494	547	680	729	726
Totals, Public Utilities.....	2,420	2,093	1,939	1,993	2,104	2,157	2,086
Manufacturing.....	1,445	1,829	2,539	2,757	3,926	4,293	4,742
Mining and smelting.....	329	403	494	631	1,422	1,724	2,097
Merchandising.....	189	226	300	330	530	580	626
Financial institutions.....	473	525	548	573	774	1,062	1,221
Other enterprises.....	69	70	83	98	151	154	177
Miscellaneous assets.....	285	284	302	320	467 ¹	561	641
Totals, Investment.....	6,913	7,092	7,960	8,664	11,461	12,577	13,468
United States ²	4,151	4,990	5,905	6,549	8,870	9,692	10,289
United Kingdom ²	2,476	1,750	1,715	1,750	2,008	2,181	2,347
Other countries.....	286	352	340	365	583	704	832

¹ New series.² Includes some investments held for residents of other countries.

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FOREIGN CAPITAL INVESTED IN CANADA CLASSIFIED BY ESTIMATED DISTRIBUTION OF OWNERSHIP AS AT DEC. 31, 1955



12.—Foreign Capital Invested in Canada by Type of Investment, classified by Estimated Distribution of Ownership, as at Dec. 31, 1955

NOTE.—Common and preferred stocks are at book values as shown in the balance sheets of the issuing companies; bonds and debentures are valued at par; and liabilities in foreign currencies are converted into Canadian dollars at par of exchange.

Type of Investment	Estimated Distribution of Ownership			Total Investments of Non-residents
	United States ¹	United Kingdom ¹	Other Countries	
	\$'000,000	\$'000,000	\$'000,000	\$'000,000
Government Securities—				
Federal.....	403	67	69	539
Provincial.....	836	39	13	888
Municipal.....	410	35	6	451
Totals, Government Securities.....	1,649	141	88	1,878
Public Utilities—				
Railways.....	556	698	106	1,360
Other.....	584	87	55	726
Totals, Public Utilities.....	1,140	785	161	2,086
Manufacturing.....	3,790	754	198	4,742
Mining and smelting.....	1,921	101	75	2,097
Merchandising.....	459	144	23	626
Financial institutions.....	817	240	164	1,221
Other enterprises.....	146	25	6	177
Miscellaneous assets.....	367	157	117	641
Totals, Investments.....	10,289	2,347	832	13,468

¹ Includes some investments held for residents of other countries.

Canadian Assets Abroad.—While there has been a great growth in non-resident investment in Canada and in the balance of indebtedness to other countries, it will be noted that Canadian assets abroad, shown in Tables 13 and 14, have continued to rise in value each year. These now represent a larger proportion of liabilities abroad than was the case before World War II, but most of the increase since then has been in government-owned assets such as the official reserves and the loans by the Canadian Government to other governments which were extended during the War and early postwar years. In 1955 the government credits outstanding had a value of \$1,635,000,000 while official holdings of exchange amounted to \$1,910,000,000 in terms of Canadian dollars. Other official Canadian assets include Canada's subscriptions to the capital of the International Bank and the International Monetary Fund which, by March 1956, amounted to \$70,900,000 and \$299,700,000 respectively. Later in 1956 there was a subscription to the International Finance Corporation of \$3,500,000.

The portion of the assets in private investments, particularly in the form of direct investments abroad by Canadian companies, is still small in relation to the corresponding non-resident stake in equities in Canada. Private long-term investments abroad by Canadians in 1955 were made up of direct investments of \$1,776,000,000 and portfolio investments of \$989,000,000. More than two-thirds of the privately owned investments were located in the United States. Direct investments in that country by Canadian businesses have been growing particularly rapidly and are mainly in the beverage, farm implement and chemical industries and in railways.

Private investments in overseas countries are widely distributed. About one-half of the total in 1955 were located in Commonwealth countries, divided fairly evenly between the United Kingdom and the remainder of the Commonwealth. Most of the direct investments in the United Kingdom were in industry, while in other Commonwealth countries there were investments in mining and petroleum as well as in industry. In foreign overseas countries the largest part is in the countries of Latin America—some \$320,000,000 in 1954—made up mainly of holdings in public utilities.

13.—Canadian Assets Abroad 1939-55

NOTE.—Excludes investments of insurance companies and banks, Canada's subscriptions to international financial institutions and short-term assets, other than official holdings of gold and foreign exchange. Holdings of stocks are at book values as shown in the books of issuing companies; holdings of bonds are shown at par values. Foreign currencies are converted into Canadian dollars at current market rates. The series for portfolio investment was reconstructed in 1952 and is not strictly comparable with preceding years.

(Millions of dollars)

Assets	1939	1948	1953*	1954*	1955
Direct investments in businesses outside Canada.....	671	788	1,485	1,628	1,776
Portfolio holdings of foreign securities.....	719	605	869	926	989
Government credits.....	31	1,878	1,778	1,705	1,635
Official balances abroad and gold.....	459	1,006	1,779	1,888	1,910
Totals.....	1,880	4,277	5,911	6,147	6,310

14.—Canadian Assets Abroad by Location of Investment as at Dec. 31, 1955

NOTE.—See headnote to Table 13.

Location of Investment	Direct Invest- ments	Portfolio Investment		Govern- ment Credits	Official Holdings of Exchange	Total Invest- ments
		Stocks	Bonds	Bonds	Total	
	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000	\$'000,000
United States.....	1,302	536	88	—	767	2,693
United Kingdom.....	157	30	17	1,202	9	1,415
Other Commonwealth countries.....	159	7	21	—	—	187
Other foreign countries.....	158	192	98	433	—	881
Official gold holdings.....	—	—	—	—	1,134	1,134
Totals.....	1,776	765	224	1,635	1,910	6,310

CHAPTER XXVI.—CURRENCY AND BANKING; MISCELLANEOUS COMMERCIAL FINANCE

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

PART I.—CURRENCY AND BANKING*

A historical sketch of currency and banking in Canada appears in the 1938 Year Book, pp. 900-905.

Section 1.—The Bank of Canada

The Bank of Canada was incorporated under the Bank of Canada Act 1934 and commenced operations on Mar. 11, 1935.

The Bank of Canada is Canada's central bank and as such its main function is to regulate the total volume of money and credit. The normal way in which this function is performed is through changes in the cash reserves of the chartered banks. Each chartered bank is required by the Bank Act to maintain, on the average during each calendar month, an amount of cash reserves, in the form of Bank of Canada notes and deposits with the Bank of Canada, equal to not less than 8 p.c. of its Canadian dollar deposit liabilities. (Prior to July 1, 1954, each chartered bank was required to maintain at all times, cash reserves equal to not less than 5 p.c. of its Canadian dollar deposit liabilities; in practice the chartered banks normally attempted to maintain a ratio of about 10 p.c.) An increase in cash reserves encourages banks to expand their assets (mainly by purchasing securities and making loans), with a resultant similar increase in their deposit liabilities; a decrease in cash reserves tends to discourage expansion and may result in some contraction. Therefore, by taking steps to alter the volume of cash reserves available to the chartered banks, the Bank of Canada is able to influence the total of chartered bank assets and the total of their Canadian dollar deposit liabilities. The deposit liabilities of the banks, except for those payable to the Government, are of course assets of the general public and, together with currency, comprise their most liquid assets. (See Table 7, p. 1142, for Canadian dollar currency and bank deposits held by the general public.)

Open market operations in Government of Canada securities constitute the chief means by which the Bank of Canada influences the volume of chartered bank reserves. When the Bank of Canada purchases a security it issues a cheque in settlement which, after it is cashed at, or deposited with, a chartered bank by the recipient, is in turn deposited by that chartered bank in its account with the Bank of Canada, thereby increasing its cash reserves. Conversely, when the Bank of Canada sells a security the cheque which

* Except where otherwise indicated, this material has been revised by the Research Division of the Bank of Canada.

it receives in payment is charged against the account of the chartered bank on which it is drawn, thus decreasing that bank's cash reserves. Increases or decreases in other assets and liabilities of the Bank of Canada also have an effect on the chartered banks' cash reserves. For example, an increase in the amount of Bank of Canada notes held by the general public tends to reduce the banks' cash reserves.

The powers of the Bank are set forth in the Bank of Canada Act 1934 (R.S.C. 1952, c. 13), revisions in which were made in 1936, 1938 and 1954. Some of these powers are outlined below.

The Bank of Canada may vary the minimum cash reserve requirements of the chartered banks between 8 p.c. and 12 p.c. of their Canadian dollar deposit liabilities, provided that the chartered banks are given a minimum notice period of one month before each increase becomes effective and that any increase is not more than 1 p.c. during any one month. When this legislation became effective on June 1, 1954, the initial requirement was 8 p.c. and it has since remained at that level.

The Bank may make loans or advances for periods not exceeding six months to chartered banks, or to banks to which the Quebec Savings Bank Act applies, on the pledge or hypothecation of certain classes of securities. Loans or advances on the pledge or hypothecation of readily marketable securities issued or guaranteed by Canada or any province may be made to the Government of Canada or the government of any province for periods not exceeding six months. Other loans may be made to the Government of Canada or the government of any province in amounts not exceeding a fixed proportion of such government's revenue; such loans must be repaid before the end of the first quarter after the end of the fiscal year of the borrower.

The Bank of Canada is required to make public at all times the minimum rate at which it is prepared to make loans or advances. This rate, known as the Bank Rate, stood at 2 p.c. per annum from Oct. 17, 1950, to Feb. 14, 1955, when it was reduced to $1\frac{1}{2}$ p.c. It was raised to 2 p.c. on Aug. 5, 1955, to $2\frac{1}{4}$ p.c. on Oct. 12, 1955, to $2\frac{3}{4}$ p.c. on Nov. 18, 1955, to 3 p.c. on Apr. 4, 1956, to $3\frac{1}{4}$ p.c. on Aug. 10, 1956, and to $3\frac{1}{2}$ p.c. on Oct. 17, 1956. Effective Nov. 1, 1956, the Bank of Canada announced that henceforth until further notice the Bank Rate would be established weekly at a fixed margin of $\frac{1}{4}$ of 1 p.c. above the latest weekly average tender rate for 91-day treasury bills. The Bank Rate rose from 3.92 p.c. at the end of 1956 to a high of 4.33 p.c. in August 1957 and then declined to 3.87 p.c. at the year-end.

The Bank has the sole right to issue paper money for circulation in Canada. Details regarding the note issue are given on p. 1140.

The Bank acts as the fiscal agent for the Government of Canada in the payment of interest and principal and generally in respect of the management of the public debt of Canada.

The Bank may buy and sell securities issued or guaranteed by Canada or any province, short-term securities issued by the United Kingdom, treasury bills or other obligations of the United States, and certain classes of short-term commercial paper. The Bank is authorized by the Industrial Development Bank Act to purchase bonds and debentures issued by the Industrial Development Bank. The Bank may buy and sell gold, silver, nickel and bronze coin, and gold and silver bullion, and may also deal in foreign exchange. The Bank may accept deposits that do not bear interest from the Government of Canada, the government of any province, any chartered bank or any bank to which the Quebec Savings Bank Act applies. The Bank does not accept deposits from individuals and does not compete with the chartered banks in commercial banking fields.

Sect. 23 of the Bank of Canada Act provides that the Bank shall maintain a reserve of gold equal to not less than 25 p.c. of its outstanding notes and deposit liabilities. This requirement was suspended in 1940 when, under the terms of the Exchange Fund Order, the Bank's gold holdings were transferred to the Exchange Fund Account to form part of Canada's official gold and United States dollar reserves. The Currency, Mint and Exchange Fund Act passed in 1952 provides that, notwithstanding Sect. 23 of the Bank of Canada Act, the Bank of Canada is not required to maintain a minimum or fixed ratio of gold or foreign exchange to its liabilities unless the Governor in Council otherwise prescribes.

The Bank is under the management of a Board of Directors composed of a Governor, a Deputy Governor and twelve Directors. The Governor and Deputy Governor are appointed for terms of seven years each by the Directors, with the approval of the Governor General in Council. The Directors are appointed by the Minister of Finance, with the approval of the Governor General in Council, for terms of three years each. The Deputy Minister of Finance is a member of the Board but does not have the right to vote. There is an Executive Committee of the Board composed of the Governor, the Deputy Governor, one Director and the Deputy Minister of Finance (who is without a vote) which has the same powers as the Board except that its every decision must be submitted to the Board at its next meeting. In addition to the Deputy Governor who is a member of the Board, there may be one or more Deputy Governors appointed by the Board of Directors to perform such duties as are assigned by the Board.

The Governor is the chief executive officer of the Bank and Chairman of the Board of Directors. The Governor has the power to veto any action or decision of the Board of Directors or of the Executive Committee but such veto is subject to confirmation or disallowance by the Governor General in Council. In the absence of the Governor, the Deputy Governor, who is a member of the Board, exercises all the powers and functions of the Governor.

The capital of the Bank is \$5,000,000 and is entirely held by the Minister of Finance. The Bank of Canada Act as amended in 1954 provides that each year 20 p.c. of the Bank's annual profits (after provision for depreciation in assets, pension funds and such matters) shall be allocated to the Rest Fund until the Rest Fund reaches an amount five times the paid-up capital of the Bank and the remainder shall be paid to the Receiver General and placed to the credit of the Consolidated Revenue Fund. At the end of 1957, the Rest Fund of the Bank reached its maximum of \$25,000,000 so that, since that date, the whole of the Bank's profits have been transferred to the Receiver General.

The head office of the Bank is at Ottawa. It has agencies at Halifax, Saint John, Montreal, Ottawa, Toronto, Winnipeg, Regina, Calgary and Vancouver and is represented in St. John's and Charlottetown. The agencies are chiefly concerned with the functions of the Bank as fiscal agent for the Government of Canada and with the issue and redemption of currency. The Industrial Development Bank, which is described on pp. 1138-1139, is a subsidiary of the Bank of Canada.

The Bank of Canada Act requires that statements of the assets and liabilities of the Bank on each Wednesday and the last day of each month be published in the *Canada Gazette*. A summary of the statement as at Dec. 31, 1955-57, appears in Table 1.

1.—Assets and Liabilities of the Bank of Canada as at Dec. 31, 1955-57

Item	1955	1956	1957
	\$'000,000	\$'000,000	\$'000,000
Assets			
Foreign exchange.....	57.6	61.0	63.6
Advances to chartered and savings banks.....	2.0	—	—
Investments—			
Treasury bills of Canada.....	262.6	505.2	467.1
Other securities issued or guaranteed by Canada maturing within 2 years.....	1,021.2	519.7 ¹	779.2
Other securities issued or guaranteed by Canada not maturing within 2 years.....	1,083.7	1,369.0 ¹	1,181.2
Bonds and debentures issued by Industrial Development Bank.....	10.1	23.0	36.2
Other securities.....	57.1	16.7	16.7
Industrial Development Bank capital stock.....	25.0	25.0	25.0
Bank premises.....	4.9	5.8	8.6
All other assets.....	96.1	22.3	81.1
Totals, Assets.....	2,620.2	2,547.7	2,658.7

¹ On Dec. 31, 1956, the basis for the valuation of securities held by the Bank of Canada was changed from "not excluding market value" to amortized value; thus figures for that date are not comparable with those for Dec. 31 of earlier years.

1.—Assets and Liabilities of the Bank of Canada as at Dec. 31, 1955-57—concluded

Item	1955	1956	1957
	\$'000,000	\$'000,000	\$'000,000
Liabilities			
Capital paid up.....	5.0	5.0	5.0
Reserve Fund.....	20.4	25.0	25.0
Notes in Circulation—			
Held by chartered banks.....	289.4	370.9	348.6
All other.....	1,449.0	1,497.8	1,555.1
Deposits—			
Government of Canada.....	89.2	38.8	35.4
Chartered banks.....	551.0	511.5	517.6
Other.....	34.0	31.2	31.2
Foreign currency liabilities.....	98.0	62.2	70.0
All other liabilities.....	84.1	5.4	70.8
Totals, Liabilities.....	2,620.2	2,547.7	2,658.7

The Industrial Development Bank.—The Industrial Development Bank, a subsidiary of the Bank of Canada, was incorporated by Act of Parliament during 1944 and its banking operations commenced on Nov. 1, 1944. Its functions are described in the preamble to the Act as follows:—

“To promote the economic welfare of Canada by increasing the effectiveness of monetary action through ensuring the availability of credit to industrial enterprises which may reasonably be expected to prove successful if a high level of national income and employment is maintained, by supplementing the activities of other lenders and by providing capital assistance to industry with particular consideration to the financing problems of small enterprises.”

The President of the Industrial Development Bank is the Governor of the Bank of Canada and the Directors are the Directors of the Bank of Canada. The \$25,000,000 capital stock of the Bank (completely paid up) was subscribed by the Bank of Canada. The Industrial Development Bank may also raise funds by the issue of bonds and debentures provided that its total direct liabilities and contingent liabilities in the form of guarantees and underwriting agreements do not exceed three times the aggregate of the Bank's paid-up capital and Reserve Fund.

The lending powers of the Bank may be extended only to industrial enterprises in Canada with respect to which it is empowered to:—

- (1) lend money or guarantee loans;
- (2) enter into underwriting agreements with regard to any issue of stock, bonds or debentures;
- (3) acquire stock, bonds or debentures from the issuing corporation or any person with whom the Bank has entered into an underwriting agreement.

Industrial enterprises as defined by the Act (amended in 1956) include: (1) manufacturing, processing, assembling, installing, overhauling, reconditioning, altering, repairing, cleaning, packaging, transporting or warehousing of goods; (2) logging, operating a mine or quarry, drilling, construction, engineering, technical surveys or scientific research; (3) generating or distributing electricity or operating a commercial air service, or the transportation of persons, or (4) supplying premises, machinery or equipment for any business mentioned in (1), (2) or (3) under a lease, contract or other arrangement whereby title to the premises, machinery or equipment is retained by the supplier.

The Bank may accept any form of collateral security against its advances, including real property.

The Industrial Development Bank is intended to supplement the activities of other lending agencies, not to compete with them, and the Act of incorporation requires that it should extend credit only when the Board of Directors is of the opinion that similar credit would not be available elsewhere on reasonable terms and conditions. The Bank is specifically prohibited from engaging in the business of deposit banking.

2.—Authorized and Outstanding Loans and Investments of the Industrial Development Bank by Province and Industrial Enterprise as at Sept. 30, 1956 and 1957

Province, Size of Loan and Industrial Enterprise	1956		1957	
	Authorized	Outstanding	Authorized	Outstanding
	\$'000	\$'000	\$'000	\$'000
Province				
Newfoundland.....	178	152	433	315
Prince Edward Island.....	5,540	1,921	5,549	1,308
Nova Scotia.....	869	561	1,722	1,040
New Brunswick.....	2,398	613	1,947	1,083
Quebec.....	32,957	19,362	36,747	23,222
Ontario.....	27,081	17,545	33,916	23,752
Manitoba.....	4,253	1,427	5,090	3,793
Saskatchewan.....	798	394	1,616	562
Alberta.....	4,158	2,109	5,658	3,642
British Columbia.....	14,655	8,068	18,265	12,959
Yukon and Northwest Territories.....	205	145	579	255
Canada.....	93,092	52,297	111,522	71,931
Size of Loans	Authorized	Credits	Authorized	Credits
	\$'000	No.	\$'000	No.
\$5,000 or under.....	37	9	44	10
\$5,001 to \$25,000.....	4,212	250	5,178	307
\$25,001 to \$50,000.....	7,529	203	9,723	250
\$50,001 to \$100,000.....	13,217	173	17,445	231
\$100,001 to \$200,000.....	15,647	102	18,948	124
\$200,001 or over.....	52,150	84	60,184	106
Totals.....	93,092	821	111,522	1,028
Industrial Enterprise	Authorized	Outstanding	Authorized	Outstanding
	\$'000	\$'000	\$'000	\$'000
Foods and beverages.....	7,970	4,047	9,504	5,565
Rubber products.....	220	193	245	167
Leather products.....	383	129	368	221
Textile products (except clothing).....	4,792	3,094	4,829	3,250
Clothing (textiles and fur).....	2,967	1,927	3,233	2,189
Wood products.....	12,159	6,825	13,944	9,155
Paper products (including pulp).....	6,220	4,169	6,416	5,407
Printing, publishing and allied industries.....	2,063	1,127	2,345	1,400
Iron and steel products (including machinery and equipment).....	9,734	5,927	12,440	7,370
Transportation equipment.....	4,283	1,232	3,946	2,814
Non-ferrous metal products.....	1,347	925	2,062	1,380
Electrical apparatus and supplies.....	4,489	3,097	4,991	3,456
Non-metallic mineral products.....	6,889	4,679	8,661	5,801
Products of petroleum and coal.....	1,499	1,290	1,483	1,185
Chemical products.....	5,756	4,240	6,163	4,003
Miscellaneous manufacturing industries.....	1,921	1,123	2,141	1,277
Transportation and storage.....	17,126	8,152	21,662	11,869
Generating or distributing of electricity.....	35	26	80	68
Mining.....	2,101	—	2,626	2,521
Construction.....	285	50	1,197	949
Industrial buildings.....	353	45	2,264	1,360
Industrial and technical services.....	500	—	922	524
Totals.....	93,092	52,297	111,522	71,931

Section 2.—Currency

Subsection 1.—Notes and Coinage

Note Circulation.—The development by which bank notes became the chief circulating medium in Canada prior to 1935 is described in the 1938 Year Book, pp. 900-905. Those features of the development which then became permanent are outlined in the 1941 Year Book, pp. 809-810.

When the Bank of Canada commenced operations in 1935 it assumed liability for Dominion notes outstanding. These were replaced in public circulation and partly replaced in cash reserves by the Bank's legal tender notes in denominations of \$1, \$2, \$5, \$10, \$20, \$50 and \$100. Deposits of chartered banks at the Bank of Canada completed the replacement of the old Dominion notes of \$1,000 to \$50,000 denomination that had previously been used as cash reserves.

The chartered banks were required under the Bank Act of 1934 to reduce gradually the issue of their own bank notes during the years 1935-45 to an amount not in excess of 25 p.c. of their paid-up capital on Mar. 11, 1935. Bank of Canada notes thus replaced chartered bank notes as the issue of the latter was reduced. Further restrictions introduced by the 1944 revisions of the Bank Act cancelled the right of chartered banks to issue or re-issue notes after Jan. 1, 1945, and in January 1950 the chartered banks' liability for such of their notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada in return for payment of a like sum to the Bank of Canada.

The classification of Bank of Canada notes in circulation by denomination shown in Table 3 for 1953-57 is not strictly comparable with the classification for earlier years. Dominion notes have been excluded from the denomination classification and the total only is shown. Also an item has been added showing the outstanding chartered bank notes issued originally for circulation in Canada. The statistics of total notes in the hands of the general public are comparable with earlier years.

3.—Bank of Canada Notes by Denomination and Other Notes in Circulation as at Dec. 31, 1953-57

Denomination	1953	1954	1955	1956	1957
	\$	\$	\$	\$	\$
Bank of Canada Notes—					
\$1.....	59,177,372	62,160,634	65,490,666	70,270,255	72,642,752
\$2.....	42,795,783	41,679,550	47,372,696	50,371,423	51,994,063
\$5.....	120,688,495	122,423,538	130,931,243	138,004,315	139,929,348
\$10.....	475,247,695	469,294,860	499,587,455	528,740,945	528,792,055
\$20.....	446,293,020	453,120,810	493,654,730	555,755,460	582,319,490
\$25.....	46,425	46,425	46,350	46,350	46,350
\$50.....	125,318,100	123,729,475	127,747,300	134,380,725	134,820,600
\$100.....	304,696,950	323,084,450	347,255,500	364,052,100	365,502,850
\$500.....	76,500	68,500	63,000	57,500	51,000
\$1,000.....	9,805,000	10,353,000	12,201,000	13,233,000	14,661,000
Totals.....	1,581,145,340	1,608,961,241	1,724,349,939	1,854,912,073	1,890,759,508
Provincial notes.....	27,568	27,568	27,568	27,568	27,568
Dominion notes.....	4,665,188	4,660,752	4,654,858	4,650,792	4,647,987
Defunct bank notes.....	88,463	88,232	88,181	88,161	88,156
Chartered bank notes.....	10,198,230	9,719,115	9,370,277	9,025,187	8,798,824
Grand Totals.....	1,599,124,789	1,623,456,907	1,738,490,823	1,868,703,781	1,904,322,043

4.—Note Circulation in the Hands of the Public as at Dec. 31, 1948-57

NOTE.—Newfoundland has long used Canadian bank notes so that when that Province united with Canada in 1949 no adjustment was necessary in the circulation figures, but the effect of including the population of Newfoundland from 1949 was to reduce the per capita note circulation by an estimated \$1.

Year Ended Dec. 31—	Bank of Canada Notes ¹	Chartered Bank Notes ²	Total	Per Capita ³
	\$	\$	\$	\$
1948.....	1,098,290,534	16,246,036	1,114,536,570	86.92
1949.....	1,095,652,035	13,990,117	1,109,642,152	82.52
1950.....	1,136,115,742	4	1,136,115,742	82.86
1951.....	1,191,091,182	4	1,191,091,182	85.02
1952.....	1,288,688,392	4	1,288,688,392	89.31
1953.....	1,335,332,954	4	1,335,332,954	90.34
1954.....	1,361,874,433	4	1,361,874,433	89.63
1955.....	1,449,045,166	4	1,449,045,166	92.88
1956.....	1,497,765,781	4	1,497,765,781	93.14
1957.....	1,555,115,143	4	1,555,115,143	93.74

¹ Total issue less notes held by chartered banks.

² Gross note circulation only; notes held by other chartered banks are not available. Includes, prior to 1950, a relatively small amount issued for circulation outside Canada.

³ Figures based on estimates of population as given at p. 119; see headnote to this table.

⁴ In January 1950, the chartered banks' liability for such of their notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada.

Coinage.—Under the Currency, Mint and Exchange Fund Act (R.S.C. 1952, c. 315), gold coins may be issued in denominations of twenty dollars, ten dollars and five dollars (nine-tenths fine or millesimal fineness, 900). Subsidiary coins include: silver coins in denominations of one dollar, 50 cents, 25 cents, 10 cents (eight-tenths fine or millesimal fineness, 800); pure nickel five-cent coins; and bronze (copper, tin and zinc) one-cent coins. Provision is made for the temporary alteration of composition in event of a shortage of prescribed metals. A tender of payment of money in coins is a legal tender in the case of gold coins for the payment of any amount; in the case of silver coins for the payment of an amount up to \$10; nickel coins for payment up to \$5; and bronze coins up to 25 cents.

5.—Canadian Coin in Circulation as at Dec. 31, 1948-57

NOTE.—The figures shown are of net issues of coin. Figures from 1901 are shown in the corresponding table of previous Year Books beginning with the 1927-28 edition.

Year Ended Dec. 31—	Silver	Nickel	Tombac ¹	Steel	Bronze	Total	Per Capita ²
	\$	\$	\$	\$	\$	\$	\$
1948.....	63,829,640	6,117,555	730,064	1,520,210	9,088,221	81,285,690	6.34
1949.....	67,874,750	6,753,780	661,333	1,519,743	9,407,325	86,216,931	6.41
1950.....	73,473,724	7,393,138	621,440	1,519,419	10,012,143	93,019,864	6.78
1951.....	78,638,143	7,815,103	599,655	1,701,849	10,794,169	99,548,919	7.11
1952.....	83,463,939	7,814,398	584,882	2,278,329	11,476,591	105,618,139	7.32
1953.....	89,550,236	7,813,081	570,847	3,109,691	12,130,181	113,174,036	7.66
1954.....	91,350,637	7,810,723	560,577	3,458,758	12,392,389	115,573,084	7.60
1955.....	95,574,457	8,076,800	555,912	3,457,712	12,956,807	120,621,688	7.62
1956.....	100,922,477	8,545,507	552,868	3,456,782	13,742,282	127,219,916	7.87
1957.....	107,116,450	8,910,869	550,743	3,455,886	14,745,243	134,779,191	7.98

¹ Tombac, a copper-zinc alloy, was used to conserve nickel for war purposes; no coins of this metal have been issued since 1944.

² Per capita figures are based on estimates of population as given at p. 119.

The Royal Canadian Mint.—The Mint at Ottawa was established as a branch of the Royal Mint under the (Imperial) Coinage Act 1870 and opened on Jan. 2, 1908. In 1931 (21-22 Geo. V, c. 48) it was constituted a branch of the Canadian Department of Finance and has since operated as the Royal Canadian Mint. From 1858 the British North American provinces, and later Canada, obtained their coins from the Royal Mint at London or from The Mint, Birmingham. Before that date, coins were mainly British, United States and Spanish. In its earlier years the operations of the Mint in Canada

were confined to the production of gold, silver and bronze coins for domestic circulation and of British sovereigns and small coins struck under contract for Newfoundland and Jamaica.

Before 1914 only small quantities of gold bullion were refined but during World War I the Mint came to the assistance of the British Government by establishing a refinery in which nearly 20,000,000 oz. t. of South African gold were treated on Bank of England account. The subsequent development of the gold mining industry in Canada resulted in gold refining becoming one of the principal activities of the Mint. Fine gold produced from the rough bullion shipments received from the mines is purchased by the Mint and later delivered to the Bank of Canada for account of the Minister of Finance in bars of approximately 400 oz. t. each or, for those mines authorized to sell gold in the open market, the bullion is shipped to various domestic and foreign processors. The fine silver extracted from the rough gold is generally used for coinage purposes.

6.—Annual Receipts of Gold Bullion at the Royal Canadian Mint and Bullion and Coinage Issued 1948-57

NOTE.—Figures from 1926 are given in the corresponding table of previous Year Books beginning with the 1946 edition.

Year	Gold Received	Gold Bullion Issued	Silver Coin Issued	Nickel Coin Issued	Steel Coin Issued	Bronze Coin Issued
	oz. t.	oz. t.	\$	\$	\$	\$
1948.....	3,401,991	3,405,073	2,829,956	615,500	—	708,300
1949.....	3,925,618	3,865,296	4,148,842	637,500	—	321,901
1950.....	4,422,968	4,347,961	5,641,805	640,510	—	607,003
1951.....	4,169,480	4,167,485	5,213,677	423,003	182,829	783,329
1952.....	3,953,158	4,031,063	4,869,552	597	576,965	683,820
1953.....	3,684,074	3,626,497	6,138,686	234	831,915	655,130
1954.....	3,829,431	3,998,836	1,864,968	27	350,229	263,897
1955.....	3,947,637	3,952,764	4,269,157	267,801	—	566,863
1956.....	3,801,789	3,774,599	5,389,464	469,993	—	786,855
1957.....	3,896,084	3,776,711	6,236,429	366,493	—	1,004,221

Subsection 2.—Canadian Dollar Currency and Bank Deposits Held by the General Public

Bank of Canada statistics concerning the dollar currency and bank deposits held by the general public are given in Table 7.

7.—Canadian Dollar Currency and Bank Deposits Held by the General Public as at Dec. 31, 1948-57

(Millions of dollars)

Year Ended Dec. 31—	Currency Outside Banks			Chartered Bank Deposits			Total Currency and Chartered Bank Deposits ¹	
	Notes	Coin	Total	Personal Savings Deposits	Other Deposits ¹	Total ¹	Excluding Personal Savings Deposits	Including Personal Savings Deposits
1948.....	1,115	70	1,185	3,752	2,725	6,477	3,910	7,662
1949.....	1,110	74	1,184	4,086	2,776	6,862	3,960	8,046
1950.....	1,136	78	1,214	4,176	3,116	7,292	4,330	8,506
1951.....	1,191	84	1,275	4,296	3,100	7,396	4,375	8,671
1952.....	1,289	88	1,377	4,600	3,281	7,881	4,658	9,258
1953.....	1,335	94	1,429	4,756	3,129	7,885	4,558	9,314
1954.....	1,362	96	1,458	5,218	3,462	8,680	4,920	10,137
1955.....	1,449	101	1,550	5,633	3,697	9,330	5,248	10,881
1956.....	1,498	108	1,605	6,007	3,580	9,587	5,185	11,192
1957.....	1,555	112	1,667	6,248	3,585	9,833	5,253	11,500

¹ Less total float, i.e., cheques and other items in transit (net). Excludes Government of Canada deposits.

Section 3.—Commercial Banking

As one of the chief functions of the early banks in Canada was to issue notes to provide a convenient currency or circulating medium, it has been expedient to cover both currency and banking in one historical sketch, which is given in the 1938 Year Book, pp. 900-905. A list of the banks at Confederation appears in the 1940 Year Book, p. 897, and bank absorptions since 1867 are given in the 1941 edition, pp. 812-813. A table in the 1937 Year Book, pp. 894-895, shows the insolvencies from Confederation; the last insolvency occurred in 1923. The more important of the revisions in banking legislation contained in the 1954 Bank Act are outlined in Subsection 1.

Subsection 1.—Chartered Banks

Canadian commercial banks are chartered or licensed by the Government of Canada and operate under one federal statute—the Bank Act—which is revised every ten years and brought into line with changing economic conditions. In addition to conducting a commercial banking business the chartered banks hold most of the public's savings deposits. The last revision of the Bank Act took place in 1954. An outline of the revisions made at that time is given in the 1956 Year Book, pp. 1109-1110.

Liquid Asset Ratio.—In the course of discussions with the chartered banks in November and December 1955, the Bank of Canada urged the adoption of a standard practice regarding the maintenance of a minimum ratio of liquid assets (cash, day-to-day loans and treasury bills) to deposits. The purpose of this suggestion was to establish a working principle of bank operations which would help the central bank in the task of restraining inflationary pressures that might threaten in the future. After discussion the banks agreed to work to achieve by May 31, 1956, a minimum liquid asset ratio of 15 p.c. which they would endeavour to maintain on a daily average basis from June on. On this basis, fluctuations above or below 15 p.c. might occur from day to day or week to week, but for the month as a whole the average would not be below the target ratio. From June 1956 the banks have maintained a daily average ratio of at least 15 p.c.

Branches of Chartered Banks.—Although there are fewer chartered banks now than at the beginning of the century, there has been a great increase in the number of branch banking offices. As a result of amalgamations, the number of banks declined from 34 in 1901 to 10 in 1931, and remained at that figure until the incorporation of a new bank—the Mercantile Bank of Canada—in 1953 brought the total to 11. Since then the amalgamation in 1955 of the Bank of Toronto and the Dominion Bank as the Toronto-Dominion Bank, and the amalgamation of Barclays Bank (Canada) with the Imperial Bank of Canada in 1956 has reduced this number to nine. The number of branches of chartered banks in each province from 1868 is given in Table 8.

8.—Branches of Chartered Banks by Province as at Dec. 31 for Certain Years 1868-1957

NOTE.—Figures for 1920 and subsequent years include sub-agencies in Canada receiving deposits for the banks employing them; there were 718 such sub-agencies in 1957.

Province or Territory	1868	1902	1905	1920	1926	1930	1940	1943	1946	1950	1955	1956	1957
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland.....	—	—	—	—	—	—	—	—	—	39	52	55	59
Prince Edward Island....	—	9	10	41	28	28	25	23	23	25	24	24	24
Nova Scotia.....	5	89	101	169	134	138	134	126	127	144	152	156	160
New Brunswick.....	4	35	49	121	101	102	97	93	96	100	109	109	110
Quebec.....	12	137	196	1,150	1,072	1,183	1,083	1,041	1,067	1,164	1,280	1,318	1,338
Ontario.....	100	349	549	1,586	1,326	1,409	1,208	1,092	1,117	1,237	1,484	1,544	1,586
Manitoba.....	—	52	95	349	224	239	162	148	151	165	187	200	207
Saskatchewan.....	—	30	87	591	427	447	233	213	226	238	261	265	269
Alberta.....	—	—	—	424	269	304	172	163	190	246	307	322	338
British Columbia.....	2	46	55	242	186	229	192	180	216	294	382	414	437
Yukon and N.W.T.....	—	—	3	3	3	4	5	5	6	9	8	9	10
Canada.....	123	747	1,145	4,676	3,770	4,083	3,311	3,084	3,219	3,679	4,246	4,416	4,538

9.—Branches of Individual Canadian Chartered Banks by Province as at Dec. 31, 1957

NOTE.—This table includes 718 sub-agencies in Canada for receiving deposits.

Bank	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.
No.	No.	No.	No.	No.	No.	No.
Bank of Canada.....	—	—	1	1	1	2
Bank of Montreal.....	16	1	21	16	138	261
Bank of Nova Scotia.....	23	8	47	37	42	202
Banque Canadienne Nationale.....	—	—	—	—	564	19
Banque Provinciale du Canada.....	—	3	—	18	303	23
Canadian Bank of Commerce.....	5	6	21	10	106	332
Imperial Bank of Canada.....	—	—	1	1	21	167
Mercantile Bank of Canada.....	—	—	—	—	1	1
Royal Bank of Canada.....	15	5	67	23	113	290
Toronto-Dominion Bank.....	—	1	2	4	49	289
Totals.....	59	24	160	110	1,338	1,586
	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Total
	No.	No.	No.	No.	No.	No.
Bank of Canada.....	1	1	1	1	—	9
Bank of Montreal.....	34	44	78	104	2	715
Bank of Nova Scotia.....	16	28	43	52	—	498
Banque Canadienne Nationale.....	4	—	—	—	—	587
Banque Provinciale du Canada.....	—	—	—	—	—	347
Canadian Bank of Commerce.....	46	52	69	116	4	767
Imperial Bank of Canada.....	11	27	42	27	1	298
Mercantile Bank of Canada.....	—	—	—	1	—	3
Royal Bank of Canada.....	63	81	68	99	3	827
Toronto-Dominion Bank.....	32	36	37	37	—	487
Totals.....	207	269	338	437	10	4,538

10.—Branches of Individual Canadian Chartered Banks outside Canada as at Dec. 31, 1955-57

NOTE.—This table does not include 15 sub-agencies operating outside Canada.

Bank and Location	1955	1956	1957	Bank and Location	1955	1956	1957
	No.	No.	No.		No.	No.	No.
Bank of Montreal—				Royal Bank of Canada—			
United Kingdom.....	2	2	2	United Kingdom.....	2	2	2
United States.....	2	2	2	British West Indies.....	17	18	21
France.....	—	3	3	United States.....	1	1	1
Germany.....	—	3	4	Cuba.....	19	19	20
Bank of Nova Scotia—				Puerto Rico.....	3	3	4
United Kingdom.....	1	1	2	Central and South America.....	25	25	26
British West Indies.....	18	22	24	Haiti.....	—	1	1
Dominican Republic.....	1	2	2	Dominican Republic.....	6	5	6
United States.....	1	1	1	France.....	1	1	1
Cuba.....	8	8	8	Toronto-Dominion—			
Puerto Rico.....	3	3	3	United Kingdom.....	1	1	1
Trinidad.....	1	1	1	United States.....	1	1	1
Canadian Bank of Commerce—				Banque Canadienne Nationale—			
United Kingdom.....	1	1	2	France.....	1	1	1
British West Indies.....	3	4	5				
United States.....	5	5	5				
				Totals.....	123	136	149

Financial Statistics of the Chartered Banks.—The classification of chartered bank assets and liabilities was revised by the Bank of Canada Act 1954, so that some of the statistics given in the following tables are not comparable with those appearing in earlier editions of the Year Book. Figures shown in Tables 11 to 13 prior to July 1954 have been adjusted to comply with the new classification. Month-end data are available from Dec. 31, 1954, to date in the Bank of Canada *Statistical Summary*.

11.—Assets and Liabilities of the Chartered Banks as at Dec. 31, 1948-57

(Millions of dollars)

Year Ended Dec. 31—	ASSETS							
	Bank of Canada Deposits and Notes	Canadian Day-to-Day Loans	Treasury Bills	Gov't. of Canada Direct and Guaranteed Bonds	Other Canadian Securities, Insured Residential Mortgages and Loans in Canada	Canadian Dollar Items in Transit (net)	Foreign Cash Items, Securities and Loans	Total Assets ¹
1948.....	738	—	129	2,830	3,315	374	812	8,517
1949.....	753	—	126	2,986	3,392	306	800	8,653
1950.....	810	—	129	2,950	3,922	431	807	9,443
1951.....	892	—	236	2,518	4,052	512	869	9,458
1952.....	899	—	138	2,647	4,353	752	980	10,128
1953.....	888	—	244	2,516	4,878	751	1,064	10,656
1954.....	791	68	360	2,953	4,963	827	1,142	11,433
1955.....	840	81	427	2,632	6,207	1,002	1,127	12,702
1956.....	882	74	740	1,675	6,820	1,330	1,486	13,428
1957.....	866	210	805	1,835	6,953	1,151	1,970	14,244
	LIABILITIES							
	Canadian Dollar Deposits					Foreign Currency Deposits	Shareholders Equity	Total Liabilities ¹
	Government of Canada	Notice		All Other	Total			
		Personal Savings	Other Notice					
1948.....	236	3,752	305	2,779	7,072	868	346	8,517
1949.....	164	4,086	347	2,720	7,317	795	353	8,653
1950.....	257	4,176	383	3,164	7,979	835	361	9,443
1951.....	88	4,296	316	3,273	7,973	878	375	9,458
1952.....	49	4,600	325	3,662	8,636	905	381	10,128
1953.....	473	4,756	278	3,603	9,111	963	419	10,656
1954.....	176	5,218	397	3,891	9,683	1,030	521	11,433
1955.....	517	5,633	464	4,234	10,848	1,056	567	12,702
1956.....	246	6,007	444	4,465	11,162	1,369	653	13,428
1957.....	423	6,248	408	4,328	11,407	1,827	732	14,244

¹ Includes other items not specified.

12.—Statement of Chartered Bank Assets and Liabilities as at Dec. 31, 1955-57

Assets and Liabilities	1955	1956	1957
	\$'000	\$'000	\$'000
Assets—			
Gold and coin in Canada.....	18,948	19,545	22,522
Gold and coin outside Canada.....	1,357	1,464	1,611
Notes of and deposits with Bank of Canada.....	840,406	882,434	866,178
Government and bank notes other than Canadian.....	44,118	46,286	52,613
Deposits with other banks in Canadian currency.....	3,873	9,090	5,554
Deposits with other banks in currencies other than Canadian.....	283,772	315,638	378,153
Cheques and other items in transit, (net).....	999,100	1,322,014	1,161,579
Government of Canada treasury bills.....	427,464	739,600	804,964
Other Government of Canada direct and guaranteed securities maturing within two years, not exceeding market value.....	475,089	406,096	409,853
Government of Canada direct and guaranteed securities maturing after two years, not exceeding market value.....	2,156,877	1,268,933	1,425,370
Canadian provincial government direct and guaranteed securities, not exceeding market value.....	322,478	268,981	285,011
Canadian municipal and school corporation securities, not exceeding market value.....	217,658	184,694	168,273
Other Canadian securities, not exceeding market value.....	481,916	510,112	508,753
Securities other than Canadian, not exceeding market value.....	281,689	375,117	431,086

12.—Statement of Chartered Bank Assets and Liabilities as at Dec. 31, 1955-57—concluded

Assets and Liabilities	1955	1956	1957
	\$'000	\$'000	\$'000
Assets—concluded			
Mortgages and hypothecs insured under the National Housing Act 1954, less provision for estimated loss.....	293,663	493,177	585,806
Call and short loans in Canada to brokers and investment dealers, secured.....	259,904	226,069	400,400
Call and short loans outside Canada to brokers and investment dealers, secured.....	176,999	345,083	575,874
Loans to Canadian provincial governments.....	82,868	95,043	88,842
Loans to Canadian municipalities and school corporations, less provision for estimated loss.....	123,898	176,620	193,081
Other current loans in Canada, less provision for estimated loss...	4,503,161	4,973,249	4,930,990
Other current loans outside Canada, less provision for estimated loss.....	341,094	374,528	519,626
Non-current loans, less provision for estimated loss.....	1,362	1,398	1,499
Bank premises at cost, less amounts written off.....	125,664	143,517	158,902
Shares of and loans to corporations controlled by the bank.....	31,280	34,878	37,984
Customers' liability under acceptances, guarantees and letters of credit as <i>per contra</i>	203,367	209,923	224,294
Other assets.....	3,731	4,407	4,686
Totals, Assets.....	12,701,736	13,427,896	14,243,504
Liabilities—			
Deposits by Government of Canada in Canadian currency.....	516,581	245,632	422,694
Deposits by Canadian provincial governments in Canadian currency.....	180,516	169,350	124,992
Deposits by other banks in Canadian currency.....	139,423	115,655	108,418
Deposits by other banks in currencies other than Canadian.....	105,671	234,427	269,739
Personal savings deposits payable after notice in Canada, in Canadian currency.....	5,632,752	6,007,180	6,107,930
Other deposits payable after notice, in Canadian currency.....	463,649	444,167	547,505
Other deposits payable on demand, in Canadian currency.....	3,915,196	4,180,355	4,095,483
Other deposits in currencies other than Canadian.....	950,223	1,134,563	1,557,240
Advances from Bank of Canada, secured.....	2,000	—	—
Acceptances, guarantees and letters of credit.....	203,367	209,923	224,294
Other liabilities.....	25,513	33,869	52,804
Capital paid up.....	180,998	195,348	211,879
Rest account.....	374,394	451,653	511,558
Undivided profits at latest fiscal year end.....	11,453	5,774	8,968
Totals, Liabilities.....	12,701,736	13,427,896	14,243,504

13.—Canadian Cash Reserves 1948-57

NOTE.—For periods prior to July 1954 all figures are daily averages; from July 1954, in accordance with the Bank Act 1954, Bank of Canada deposits are averages of the juridical days in the month shown while Bank of Canada notes and Canadian dollar deposits are averages of the four consecutive Wednesdays ending with the second last Wednesday in the previous month.

(Millions of dollars)

Year	Cash Reserves			Canadian Dollar Deposit Liabilities ¹	Average Cash Reserve Ratio ²
	Bank of Canada Deposits	Bank of Canada Notes	Total		
1948.....	531	181	711	6,547	10.9
1949.....	550	196	746	7,178	10.4
1950.....	548	207	755	7,487	10.1
1951.....	567	225	792	7,759	10.2
1952.....	606	239	844	8,110	10.4
1953.....	627	256	883	8,624	10.2
1954—January to June.....	634	260	894	8,820	10.1
1954—July to December.....	525	286	811	9,097	8.9
1955.....	541	293	834	9,915	8.4
1956.....	548	325	873	10,527	8.3
1957.....	535	335	870	10,601	8.2

¹ From July 1954 the figures are not adjusted for items in transit and are not strictly comparable with the figures or earlier periods. ² Prior to July 1, 1954, the statutory minimum requirement was 5 p.c. for each day; since that date it has been a monthly average of 8 p.c.

14.—Classification of Chartered Bank Deposit Liabilities Payable to the Public in Canada in Canadian Currency as at Sept. 30, 1956 and 1957

Deposit Accounts of the Public of—	1956			1957		
	Personal Savings Deposit Accounts	Other Deposit Accounts of the Public	Total Deposit Accounts of the Public	Personal Savings Deposit Accounts	Other Deposit Accounts of the Public	Total Deposit Accounts of the Public
	No.	No.	No.	No.	No.	No.
Less than \$100.....	4,759,594	663,436	5,423,030	4,866,268	761,023	5,627,291
\$100 or over but less than \$1,000.....	2,892,455	517,352	3,409,807	2,949,492	612,645	3,562,137
\$1,000 or over but less than \$10,000...	1,280,877	262,833	1,543,710	1,355,253	286,735	1,641,988
\$10,000 or over but less than \$100,000.	55,942	46,017	101,959	57,452	49,132	106,584
\$100,000 or over.....	975	5,674	6,649	814	5,397	6,211
Totals, Deposits.....	8,989,843	1,495,312	10,485,155	9,229,279	1,714,932	10,944,211

15.—Classification of Chartered Bank Loans in Canadian Currency as at Dec. 31, 1956 and 1957

Class of Loan	1956	1957
	\$'000,000	\$'000,000
General Loans—		
Personal.....	786.1	725.1
To individuals, fully secured by marketable bonds and stocks.....	313.3	256.6
Home improvement loans.....	37.9	48.0
To individuals, not elsewhere classified.....	434.9	420.5
Farmers—		
Farm Improvement Loans.....	129.7	125.4
Other farm loans.....	227.0	223.7
Industry.....	1,215.8	1,309.7
Chemical and rubber products.....	63.4	71.2
Electrical apparatus and supplies.....	62.9	53.4
Food, beverages and tobacco.....	208.0	234.6
Forest products.....	196.2	207.6
Furniture.....	22.7	20.3
Iron and steel products.....	150.9	164.7
Mining and mine products.....	101.0	169.1
Petroleum and products.....	144.7	108.2
Textiles, leather and clothing.....	187.5	150.3
Transportation equipment.....	48.5	63.6
Other products.....	59.9	61.9
Merchandisers.....	690.0	724.5
Instalment and other finance companies.....	394.5	281.2
Construction contractors.....	312.2	253.5
Public utilities, transportation and communications.....	151.9	173.1
Other business.....	394.7	412.7
Religious, educational, health and welfare institutions.....	90.3	115.0
Totals, General Loans.....	4,392.2	4,343.9
Other Loans—		
Provincial governments.....	95.0	88.9
Municipal governments and school districts.....	176.6	193.1
Stockbrokers.....	89.4	57.5
Investment dealers.....	67.6	133.0
Loans to finance the purchase of Canada Savings Bonds.....	169.4	176.1
Grain dealers and exporters.....	372.5	412.4
Totals, Other Loans.....	970.5	1,061.0
Totals, Loans in Canadian Currency.....	5,362.6	5,404.9

16.—Chartered Bank Earnings, Expenses and Changes in Shareholders' Equity, Fiscal Years Ended in 1953-57

NOTE.—In 1953-54 the financial years of seven banks ended on Oct. 31, two on Nov. 30 and two on Sept. 30; in 1955 the financial years of eight banks ended on Oct. 31, two on Nov. 30 and one on Sept. 30; in 1956 and 1957 the financial years of six banks ended on Oct. 31, two on Nov. 30 and one on Sept. 30.

(Millions of dollars)

Item	1953	1954 ¹	1955	1956	1957
Current Operating Earnings—					
Interest and discount on loans.....	191.6	219.3	236.3	314.2	380.6
Interest, dividends and trading profits on securities.....	111.4	124.3	128.4	102.8	118.4
Exchange, commission, service charges and other current operating earnings.....	75.5	81.9	89.0	96.5	109.5
Totals, Current Operating Earnings.....	378.5	425.5	453.7	513.5	608.5
Current Operating Expenses—²					
Interest on deposits.....	65.7	91.5	105.2	129.1	183.4
Remuneration to employees.....	133.4	143.6	153.1	167.8	188.3
Contributions to pension funds.....	13.0	13.6	13.6	14.0	13.8
Provision for depreciation of bank premises.....	7.1	9.0	10.1	11.4	12.7
Other, incl. taxes other than income taxes.....	56.6	63.5	70.1	77.5	86.0
Totals, Operating Expenses².....	275.8	321.2	352.1	399.8	484.2
Net Current Operating Earnings².....	102.8	104.3	101.6	113.7	124.3
Less provision for losses and addition to inner reserves ³	25.3 ⁴	—34.7 ⁴	23.1 ⁴	11.0 ⁴	2.4 ⁴
Less provision for income taxes ⁵	30.1	58.0	37.2	41.7	56.6
Leaving for dividends and additions to shareholders' equity	47.4	81.0	41.3	61.0	65.3
Dividends to shareholders.....	20.4	21.5	26.2	31.9	35.4
Addition to shareholders' equity.....	27.0	59.5	15.1	29.1	29.9
ADDITIONS TO SHAREHOLDERS' EQUITY					
From Net Operating Earnings and Inner Reserves to—					
Undivided profits.....	—6.1	2.5	2.4	—5.7	3.2
Rest account.....	33.1	57.0	12.7	34.9	26.7
From Issue of New Shares—					
Rest account.....	1.9	29.9 ⁶	19.8	42.1	33.3
Capital paid up.....	2.3	16.2 ⁶	13.7	14.2	16.5
TOTALS, INCREASE IN SHAREHOLDERS' EQUITY.....	31.2	105.7	48.6	85.5	79.7

¹ Includes figures for eleven months only for two banks (accounting on the average for 7.3 p.c. of total bank assets) which changed their financial year-ends from Nov. 30 to Oct. 31.

² Before provision for income taxes and losses and additions to inner reserves.

³ Includes capital profits and losses and non-recurring items.

⁴ After deduction of re-transfers from inner reserves to undivided profits and rest account amounting to \$17,000,000 in 1953, \$48,000,000 in 1954, \$4,000,000 in 1955, \$19,000,000 in 1956 and \$18,700,000 in 1957.

⁵ Includes provision for income taxes on the taxable portion of additions to inner reserves and on that portion of the funds re-transferred from inner reserves not taxed previously. Includes foreign income taxes.

⁶ Includes increase of \$400,000 in rest account and \$1,500,000 in capital paid up which represented the capital of a bank that commenced business in December 1953.

Cheque Payments.—A monthly record of the amounts of cheques charged to customer accounts at all chartered bank offices in 35 major clearing-house centres of Canada is available from 1924. Except for a minor setback in 1938, the value of cheques cashed shows a continuously upward trend from 1932, the low point of the depression years. The total of \$205,558,447,000 in 1957 was a record, 565 p.c. greater than in 1938; the increase almost equalled the gain in gross national production during the same period. The advance was well distributed throughout Canada's five economic areas. British

Columbia showed the largest gain in this comparison with an increase of 758 p.c. The Prairie Provinces recorded the second largest advance of 601 p.c., followed in order by Ontario, the Atlantic Provinces and Quebec.* As compared with 1956, all five areas showed gains, with Ontario and Quebec accounting for nearly 78 p.c. of the \$13,000,000,000 advance.

Value of cheques cashed in 29 centres was higher in 1957 than in 1956. Payments in the two leading centres reached all-time peaks, Toronto advancing over 11 p.c. and Montreal nearly 5 p.c. In the same comparison Winnipeg decreased by 2 p.c. and Vancouver increased by almost 8 p.c.

* St. John's, Nfld., was included in the 1957 figure but not in 1938 data. Excluding this centre the ranking would be: British Columbia, the Prairie Provinces, Ontario, Quebec and the Maritime Provinces.

17.—Cheques Cashed at 35 Clearing-House Centres 1953-57

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Clearing-House Centre	1953	1954	1955	1956	1957
	\$	\$	\$	\$	\$
Atlantic Provinces	3,397,536,751	3,483,572,588	3,623,885,796	4,136,063,557	4,253,883,344
Halifax.....	1,473,198,649	1,578,537,898	1,627,402,746	1,900,368,542	1,862,262,193
Moncton.....	508,737,477	516,387,794	558,648,038	616,097,610	610,987,505
Saint John.....	680,166,727	686,419,892	720,696,563	824,915,065	974,094,965
St. John's.....	735,433,898	702,227,004	717,138,449	794,682,340	806,538,681
Quebec	38,139,426,225	42,853,090,654	47,931,766,648	57,635,780,762	60,153,465,596
Montreal.....	34,178,607,458	38,498,287,577	43,262,348,510	52,524,281,929	54,937,929,994
Quebec.....	3,535,148,293	3,946,839,332	4,220,646,837	4,575,848,864	4,675,308,837
Sherbrooke.....	425,670,474	407,873,745	448,771,301	535,649,969	540,226,765
Ontario	59,073,780,087	65,614,571,762	71,973,447,183	84,580,096,136	92,469,365,362
Brantford.....	522,687,516	494,781,493	529,527,130	596,455,633	587,964,512
Chatham.....	433,438,973	403,893,774	425,388,521	448,947,214	552,228,607
Cornwall.....	200,420,702	214,915,773	292,898,906	387,278,729	405,239,116
Fort William.....	311,696,268	310,230,256	354,323,721	410,549,615	455,892,329
Hamilton.....	3,409,585,973	3,175,436,695	3,556,484,589	4,179,292,551	4,355,968,082
Kingston.....	341,335,311	366,274,647	419,087,713	464,435,514	449,613,360
Kitchener.....	765,740,577	766,279,900	817,143,240	940,310,341	978,856,453
London.....	1,973,402,244	2,047,498,306	2,055,087,653	2,279,949,005	2,489,582,356
Ottawa.....	4,588,480,404	3,415,300,005	3,267,767,785	3,567,496,334	3,823,157,651
Peterborough.....	365,075,178	368,850,304	380,474,408	515,640,907	533,262,032
St. Catharines.....	632,551,049	616,343,148	683,520,885	780,623,214	795,132,217
Sarnia.....	433,418,719	434,253,776	476,917,287	552,812,970	571,839,628
Sudbury.....	434,356,825	444,396,796	497,174,554	580,450,567	641,458,123
Toronto.....	42,579,170,381	50,646,604,603	55,628,552,603	66,301,163,713	73,497,632,863
Windsor.....	2,082,419,967	1,909,512,281	2,589,098,188	2,574,689,829	2,331,538,033
Prairie Provinces	25,019,281,050	24,155,325,487	25,008,324,359	30,706,483,084	32,060,426,593
Brandon.....	186,064,872	184,748,103	191,777,756	217,917,059	222,033,280
Calgary.....	5,020,505,662	4,985,475,389	5,415,909,240	7,280,076,762	8,319,489,021
Edmonton.....	3,514,626,107	3,609,993,461	4,051,760,277	4,728,775,559	4,876,156,389
Lethbridge.....	349,470,995	344,029,413	354,898,604	401,410,718	421,533,161
Medicine Hat.....	157,084,209	142,905,140	146,543,311	176,628,478	193,144,298
Moose Jaw.....	319,040,193	311,252,549	295,191,500	324,438,043	340,909,600
Prince Albert.....	175,349,193	160,153,483	155,489,736	165,300,168	185,407,182
Regina.....	2,482,735,680	2,297,905,822	2,395,122,040	2,885,106,529	3,233,572,111
Saskatoon.....	741,432,468	701,960,040	708,209,073	773,856,439	849,665,271
Winnipeg.....	12,072,971,671	11,416,901,697	11,294,022,822	13,752,975,329	13,418,516,280
British Columbia	11,786,822,545	11,956,325,458	12,812,853,961	15,231,472,672	16,621,305,755
New Westminster.....	554,708,805	608,576,723	673,630,786	716,803,680	742,204,569
Vancouver.....	9,790,943,286	9,752,576,977	10,398,019,050	12,579,751,243	13,523,017,398
Victoria.....	1,441,170,454	1,595,171,758	1,741,204,125	1,934,917,749	2,356,083,788
Totals	137,416,846,658	148,062,795,949	161,350,877,947	192,289,896,211	205,558,446,650

¹ Includes some debits reported in preceding years.

Subsection 2.—Government and Other Banking Institutions

There are three distinct types of savings banks in Canada in addition to the savings departments of the chartered banks and of trust and loan companies: (1) the Post Office Savings Bank, in which deposits are a direct obligation of the Government of Canada; (2) Provincial Government savings banking institutions in Newfoundland, Ontario and Alberta, where the depositor becomes a direct creditor of the province; and (3) two important savings banks in the Province of Quebec—the Montreal City and District Savings Bank and La Banque d'Économie de Québec—established under federal legislation and reporting monthly to the Federal Department of Finance. In addition, co-operative credit unions encourage savings among low-income classes and extend small loans to its members.

Post Office Savings Bank.—The Post Office Savings Bank was established under the Post Office Act of 1867 (31 Vict., c. 10) to "enlarge the facilities now available for the deposit of small savings, to make the Post Office available for that purpose, and to give the direct security of the nation to every depositor for repayment of all money deposited by him together with the interest due thereon". Branches of the Government of Canada's Savings Bank under the Department of Finance were gradually amalgamated with this Bank over a period of 50 years and the amalgamation was completed in March 1929. Summary financial statistics for the years ended Mar. 31, 1953-57, follow. Figures back to 1868 are available in previous editions of the Year Book.

<i>Item</i>	<i>1953</i>	<i>1954</i>	<i>1955</i>	<i>1956</i>	<i>1957</i>
	\$	\$	\$	\$	\$
Deposits and Interest.....	12,263,697	11,330,055	10,115,308	9,940,163	10,416,886
Deposits.....	11,521,743	10,597,046	9,403,227	9,241,388	9,663,774
Interest on deposits.....	741,954	733,009	713,081	698,776	753,112
Withdrawals.....	10,972,700	12,859,370	11,127,555	10,556,369	10,662,847
Balance on deposit.....	39,322,230	37,792,914	36,780,667	36,164,460	35,918,499

Provincial Government Savings Banks.—Institutions for the deposit of savings are operated by the Provincial Governments of Newfoundland, Ontario and Alberta.

Newfoundland.—The Newfoundland Savings Bank was established in 1834 and the following is a summary financial statement for the years ended Mar. 31, 1955-57.

<i>Item</i>	<i>1955</i>	<i>1956</i>	<i>1957</i>
	\$	\$	\$
Interest on investments, etc.....	802,218	953,547	972,347
Net rental income.....	2,958	3,195	2,849
Profit on sale of investments.....	81,020	37,808	—1,664
Less: Interest on deposits.....	709,542	734,972	748,780
Less: Expenses.....	55,924	53,843	56,716
Less: Transfer to reserves.....	31,065	31,074	31,118
NET INCOME.....	179,665	174,661	136,918

The number of accounts increased from 36,512 at Mar. 31, 1956, to 36,561 in 1957; deposits decreased from \$28,637,052 to \$28,343,120 in the same comparison. On Apr. 1, 1957, the interest rates payable on deposits of private individuals, trust funds and estates, were increased from 2½ p.c. to 3 p.c. per annum in respect of all amounts in excess of \$5,000.

Ontario.—The establishment of the Province of Ontario Savings Office was authorized by the Ontario Legislature at the 1921 Session and the first branches were opened in March 1922. Interest at the rate of $2\frac{1}{2}$ p.c. and $2\frac{3}{4}$ p.c. per annum, compounded half-yearly, is paid on accounts, and deposits are repayable on demand. Total deposits at Mar. 31, 1957, were \$80,500,000 and the number of depositors was approximately 96,000. Twenty-one branches were in operation throughout the Province.

Alberta.—Savings deposits are accepted at 50 Provincial Treasury Branches throughout Alberta. The total of these deposits at Mar. 31, 1957, was \$23,398,702, payable on demand and bearing interest at 2 p.c. per annum.

The Provincial Treasury has issued demand certificates bearing interest at $1\frac{1}{2}$ p.c. or term certificates for one, two, three, four or five years in denominations of \$25 and upwards, bearing interest at 2 p.c. for one or two years, $2\frac{1}{4}$ p.c. for three or four years and $2\frac{1}{2}$ p.c. for five years. The total amount in savings certificates at Mar. 31, 1957, was \$8,030, made up of \$5,680 in demand certificates and \$2,350 in term certificates. Deposits from the public for the purchase of such certificates were discontinued as from April 1951.

Quebec Savings Banks.—The Montreal City and District Savings Bank, founded in 1846 and now operating under a charter of 1871 had, at Mar. 31, 1957, a paid-up capital and reserve of \$8,500,000, savings deposits of \$219,764,429 and total liabilities of \$229,030,219. Total assets amounted to \$229,030,219, including over \$153,000,000 of federal, provincial and municipal securities. La Banque d'Économie de Québec, founded in 1848 (as La Caisse d'Économie de Notre-Dame de Québec) under the auspices of the St. Vincent de Paul Society, incorporated by Act of the Canadian Legislature in 1855 and given a federal charter by 34 Vict., c. 7, had at Mar. 31, 1957, savings deposits of \$35,235,882 and a paid-up capital and reserve of \$3,000,000. Liabilities amounted to \$43,410,151 and total assets of a like amount.

The following statement shows the combined savings deposits in the Montreal City and District Savings Banks and La Banque d'Économie de Québec for the years ended Mar. 31, 1948-57. Figures back to 1868 are available in previous editions of the Year Book.

<i>Year</i>	<i>Deposits</i>	<i>Year</i>	<i>Deposits</i>
	\$		\$
1948.....	170,103,786	1953.....	214,122,001
1949.....	184,250,615	1954.....	219,372,081
1950.....	192,567,275	1955.....	237,816,198
1951.....	193,982,871	1956.....	256,526,482
1952.....	200,342,385	1957.....	255,000,311

Credit Unions.*—During the past decade credit unions have become quite important among the savings and loan institutions in Canada since they are used by one Canadian in every eight. This is a self-help movement in which small savings of nearly 2,000,000 people have resulted in assets of \$768,000,000, or an average per member of about \$400. The number of credit unions has almost doubled during the postwar period and the membership has increased almost threefold. The bulk of the membership is in Quebec and Ontario. In the former province assets is mostly held in the form of deposits, while in Ontario the major part of the assets are in shares.

Loans are granted to members for provident and productive purposes from the accumulated pooled savings and are mostly secured by personal notes. Loans in 1956 amounted to \$319,000,000.

There were 27 central credit unions in 1956 receiving deposits from and making loans to individual credit unions. These centrals are incorporated under provincial legislation to facilitate the flow of funds to credit unions that cannot meet the demand for local loans.

A Canadian Co-operative Credit Society serves as a central for all Canada.

* Prepared in the Economics Division, Marketing Services, Department of Agriculture, Ottawa.

18.—Credit Unions in Canada 1947-56

Year	Credit Unions Chartered	Credit Unions Reporting	Members ¹	Assets ¹
	No.	No.	No.	\$
1947.....	2,516	2,367	779,199	221,116,168
1948.....	2,608	2,482	850,608	253,584,282
1949 ²	2,819	2,705	940,427	282,242,278
1950.....	2,965	2,801	1,036,175	311,532,143
1951.....	3,121	2,952	1,137,931	358,646,767
1952.....	3,335	3,080	1,260,435	424,400,375
1953.....	3,606	3,413	1,434,270	489,266,090
1954.....	3,920	3,690	1,560,715	552,362,871
1955.....	4,100	3,899	1,731,328	652,553,665
1956.....	4,191	3,928	1,899,477	707,834,043

¹ Reporting organizations only.² Newfoundland included from 1949

19.—Summary Statistics of Credit Unions by Province 1955 and 1956

Year and Province	Credit Unions Chartered	Credit Unions Reporting	Members ¹	Assets ¹	Shares ¹	Deposits ¹	Loans to Members during Year ¹	Total Loans since Inception ¹
	No.	No.	No.	\$	\$	\$	\$	\$
1955								
Newfoundland.....	72	51	3,273	301,933	261,039	10,297	188,118	3,136,907
P. E. Island.....	58	58	9,930	1,212,776	977,501	109,895	794,751	7,206,000
Nova Scotia.....	218	190	51,985	8,654,480	7,810,490	175,324	5,525,365	45,357,157
New Brunswick.....	165	161	69,078	9,154,079	8,241,538	121,136	4,865,332	39,063,716
Quebec—								
Desjardins.....	1,147	1,136	854,297	405,827,942	27,326,573	353,435,044	102,595,578	804,292,327
Que. League.....	196	196	50,000 ²	9,728,705	7,184,637	1,915,447	6,500,000 ²	27,123,196
Montreal Fed'n.....	14	14	30,221	23,539,067	1,436,721	20,662,708	3,580,169	39,744,562
Ontario.....	1,235	1,130	353,109	90,602,489	62,211,998	17,809,779	70,886,672	333,134,969
Manitoba.....	192	188	56,192	15,317,229	10,600,842	2,873,348	10,885,604	60,977,782
Saskatchewan.....	284	270	80,366	32,356,118	23,988,999	4,928,173	15,621,498	113,072,340
Alberta.....	228	221	44,970	11,363,674	9,637,089	695,811	8,731,826	48,309,780
British Columbia.....	291	284	127,877	44,552,173	33,969,881	6,433,673	29,799,078	139,447,768
Totals, 1955.....	4,100	3,899	1,731,328	652,553,665	193,647,308	409,170,635	259,973,991	1,660,866,504
1956								
Newfoundland.....	70	55	3,745	360,447	311,940	11,122	210,689	3,359,592
P. E. Island.....	59	59	9,750	1,288,152	1,052,901	103,850	727,533	7,933,400
Nova Scotia.....	221	190	51,824	9,656,665	8,665,556	224,149	6,095,032	51,452,190
New Brunswick.....	166	164	73,196	10,731,952	9,716,736	122,352	5,704,088	44,767,804
Quebec—								
Desjardins.....	1,160	1,150	932,469	464,582,293	30,750,101	404,894,750	120,002,792	924,295,119
Que. League.....	197	192	53,586	13,172,608	10,341,097	1,915,490	7,200,000 ²	34,323,196
Montreal Fed'n.....	14	14	33,539	27,385,093	1,686,945	23,975,503	6,137,991 ²	46,882,553
Ontario.....	1,275	1,113	403,104	113,643,876	77,640,573	19,929,143	91,445,319	422,729,544
Manitoba.....	196	190	60,491	18,740,928	13,067,333	3,419,804	13,925,440	74,903,221
Saskatchewan.....	283	278	86,036	38,646,038	28,798,162	6,512,309	17,775,838	181,304,432
Alberta.....	243	233	49,378	13,781,244	11,673,328	925,817	10,538,680	58,741,664
British Columbia.....	307	290	142,359	55,849,147	42,818,127	5,652,258	39,679,655	179,616,486
Totals, 1956.....	4,191	3,928	1,899,477	767,834,043	236,522,799	467,686,547	319,443,057	1,980,309,201

¹ Reporting organizations only.² Estimated.

Section 4.—Foreign Exchange

The dollar, established officially as the currency of the united provinces of Canada on Jan. 1, 1858, and extended to cover the new Dominion by the Uniform Currency Act of 1870, was defined as 15/73 of the British gold sovereign.* That is, the par rate of exchange between the dollar and the pound sterling was fixed at \$4.866, making the Canadian currency the equivalent of the United States dollar at parity. With minor variations between the import and export gold points representing the cost of shipping gold in either direction, the value of the pound sterling in Canada remained at this level until the outbreak of World War I. The United States dollar, on the other hand, was at a discount in terms of Canadian funds for the first eleven years after Confederation since it was not redeemable in gold from February 1862 to January 1879. On the basis of gold equivalents it would appear that the greatest monthly average discount on the United States dollar after Confederation was approximately 31 p.c., reached in August 1868. From 1879 to 1914 the dollars of the two countries remained at par, varying only within the gold points or under \$2 per thousand.

On the outbreak of World War I, Canada and the United Kingdom suspended the gold standard. For some weeks both the pound and the Canadian dollar rose to a premium in New York. Subsequently both fell back with the pound going to a slight discount. In January 1916 the pound was officially pegged at \$4.76 in American funds. This level was maintained with the help of funds realized by sales of United States securities owned by residents of the United Kingdom, by borrowing in the United States and, after the American entry into the War, by the United States Government financing Allied purchases in that country.

From 1915 to the end of 1917 fluctuations in the rate of exchange between the Canadian and United States dollars did not exceed 2 p.c. on either side of parity; the pound was stable in terms of United States dollars during this period. In 1918 the Canadian dollar began to weaken. After the pound was unpegged in 1919 the Canadian dollar declined further and in 1920 it fell to 82 cents in New York with sterling going as low as \$3.18.

By the latter half of 1922 the Canadian dollar had returned practically to par in New York. Despite some further weakness in sterling, the dollar remained close to that level during the next two years, averaging 98.04 and 98.73 cents in terms of the United States dollar in 1923 and 1924, respectively, and fluctuating between a discount of about 3.6 cents and a premium of approximately 0.4 cents. After the United Kingdom resumed gold payments in April 1925, the range of fluctuation of the Canadian dollar narrowed further. From Canada's return to the gold standard July 1, 1926, to January 1929, the exchange rate remained within the gold points. The Canadian dollar then went to a slight discount in New York. With the exception of the period July to November 1930, when it went to a small premium in New York, the dollar remained below parity until the United Kingdom abandoned the gold standard in September 1931. After that month the pound sterling depreciated sharply and the Canadian dollar followed, reaching low[†] in New York of 80.5 cents in December 1931 and 82.6 cents in April 1933.

Following the prohibition of gold exports in the latter month by the United States, the pound and the Canadian dollar strengthened rapidly in terms of American funds. By November 1933, both currencies had reached a premium in New York. Meanwhile in a series of steps beginning with permitting the export of newly mined gold in August

* The gold sovereign remained the standard for the Canadian dollar until 1910 when the currency was defined in terms of fine gold making it the exact gold equivalent of the United States dollar. Both British and United States gold coins were, however, legal tender in Canada for this whole period.

† Noon quotations. Daily highs and lows may have exceeded these rates.

1933, the United States moved towards resumption of the gold standard. As of Feb. 1, 1934, the United States Treasury undertook to buy all gold offered at \$35 per ounce. After that the exchange rate between the Canadian and United States dollar stabilized. Until the outbreak of war in 1939 much of the trading was conducted within one cent of parity although the Canadian dollar in New York did go as high as 103.6 cents (September 1934) and as low as 98.0 cents (September 1938).*

On the outbreak of World War II in September 1939, the United Kingdom and other sterling countries introduced foreign exchange control involving fixed buying and selling rates of \$4.02½ and \$4.03½ respectively in terms of the U.S. dollar. The Canadian dollar in New York declined until Sept. 16, 1939, when the Government instituted foreign exchange control† in Canada and established fixed buying and selling rates of \$1.10 to \$1.11 for the U.S. dollar and \$4.43 to \$4.47 for sterling. As compared with previous months the depreciation of the Canadian dollar in terms of United States funds was approximately half as great as that of the pound sterling.

Apart from a minor adjustment on Oct. 15, 1945, when selling rates for U.S. dollars and sterling were lowered to \$1.10½ and \$4.45, respectively, the official rates for the Canadian dollar remained unchanged until July 5, 1946. At that time the rate on the U.S. dollar was restored to par, with buying and selling rates for that currency of \$1.00 to \$1.00½ and for sterling \$4.02 to \$4.04. These rates continued in effect until Sept. 19, 1949, when, following a 30.5-p.c. reduction by the United Kingdom in the value of sterling to \$2.80 U.S. (an action which was paralleled in varying degrees by numerous other currencies) Canada returned to the former official rates of \$1.10 and \$1.10½ for United States funds. Sterling was quoted at \$3.07¼ and \$3.08¾ on the basis of the New York cross rate.

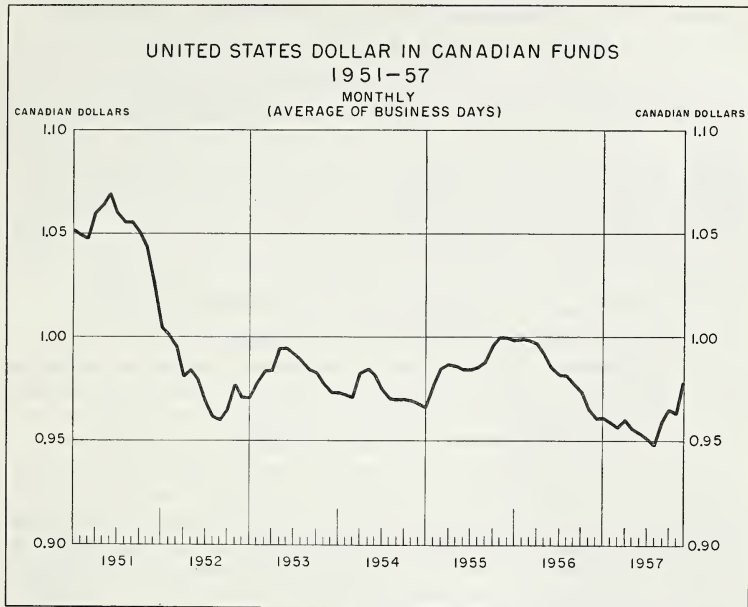
On Sept. 30, 1950, the Minister of Finance announced that official fixed foreign exchange rates which had been in effect at varying levels since 1939 would be withdrawn effective Oct. 2. Since then the Government's policy has been to allow the rate to be determined by the normal play of economic forces without official intervention by the Exchange Fund Account except to ensure orderly conditions in the foreign exchange market. No attempt is made to reverse persistent trends, but only to smooth out excessive short-run fluctuations.

Until Dec. 14, 1951, this policy was carried out within the framework of exchange control. On that date the Foreign Exchange Control regulations were revoked by the Governor in Council and new regulations were passed which exempted all persons and transactions from the various requirements of the Foreign Exchange Control Act. These actions terminated exchange control in Canada and the Foreign Exchange Control Act was repealed in 1952.

The movements of the U.S. dollar in Canadian funds from January 1951 to the end of 1957 are shown on the following chart. After the major change that occurred in the latter half of 1951 and the first three quarters of 1952, the U.S. dollar fluctuated within a comparatively narrow range between a low of 95.9 cents in September 1952 and a high of 100.1 cents in November 1955. In the second quarter of 1956, however, the U.S. dollar began to weaken and this movement continued into the third quarter of 1957. The previous postwar low (95.9 cents) was passed in November 1956 and by August 1957 the U.S. dollar had fallen to 94.2 cents, a record low for the present century. In the last four months of 1957 the U.S. dollar rose again to close the year at 98.4 cents.

* Noon quotations. Daily highs and lows may have exceeded these rates.

† The operations of the Foreign Exchange Control Board from the time of its establishment to the termination of exchange control in December 1951 are reviewed in previous editions of the Year Book.



20.—Canada's Holdings of Gold and United States Dollars as at Dec. 31, 1940-57
(Millions of U.S. Dollars)

Year	Exchange Fund Account and Bank of Canada		Other Government of Canada Accounts	Total	Year	Exchange Fund Account and Bank of Canada		Other Government of Canada Accounts	Total
	Gold	U.S. Dollars	U.S. Dollars	Gold and U.S. Dollars		Gold	U.S. Dollars	U.S. Dollars	Gold and U.S. Dollars
1940.....	136.5	172.8	20.8	332.1 ¹	1949.....	486.4	594.1	36.6	1,117.1 ²
1941.....	135.9	28.2	23.5	187.6	1950.....	580.0	1,144.9	16.6	1,741.5
1942.....	154.9	88.0	75.6	318.5	1951.....	841.7	899.5	37.4	1,778.6
1943.....	224.4	348.8	76.4	649.6	1952.....	885.0	961.8	13.4	1,860.2
1944.....	293.9	506.2	102.1	902.2	1953.....	986.1	802.0	30.4	1,818.5
1945.....	353.9	922.0	232.1	1,508.0	1954.....	1,072.7	833.4	36.5	1,942.6
1946.....	536.0	686.3	22.6	1,244.9	1955.....	1,133.9	692.0	74.9	1,900.8
1947.....	286.6	171.8	43.3	501.7	1956.....	1,103.3	783.7	49.2	1,936.2
1948.....	401.3	574.5	22.0	997.8	1957.....	1,100.3	728.0		1,828.3

¹ Includes private holdings, exclusive of working balances, of \$2,000,000 at Dec. 31, 1940. ² Excludes \$18,200,000 borrowed in the United States in August 1949 and set aside for the retirement on Feb. 1, 1950, of a security issue guaranteed by the Federal Government and payable at the holder's option in U.S. dollars.

PART II.—MISCELLANEOUS COMMERCIAL FINANCE

Section 1.—Loan and Trust Companies*

An outline of the development of loan and trust companies in Canada from 1844 to 1913 is given in the 1934-35 Year Book, p. 993. The laws relating to loan and trust companies were revised by the Loan and Trust Companies Acts of 1914 (R.S.C. 1952, cc. 170 and 272), with the result that the statistics of provincially incorporated loan and trust companies ceased to be collected. However, summary information has been supplied by provincial companies since 1922 and figures for the years 1955 and 1956 are included in Table 1 in order to complete the statistics for loan and trust companies throughout Canada. It is estimated that more than 95 p.c. of the business of provincial companies is represented in the figures, so that they may be accepted as fairly inclusive and representative of the volume of business transacted as compared with the federally licensed companies.

The statistics of Tables 2 and 3 refer to those companies incorporated both by the Government of Canada and by the provinces. Included in the statistics of federal companies are data of loan and trust companies incorporated by the Province of Nova Scotia and brought by the laws of that Province under the examination of the federal Department of Insurance, as well as data for trust companies in New Brunswick and Manitoba.

The progress of the aggregate of loan company business in Canada is indicated by the increase in the book value of the assets of all loan companies from \$188,186,072 in 1923 to \$437,169,171 in 1956. The assets of trust companies (not including estates, trust and agency funds, which cannot be regarded as assets in the same sense as company and guaranteed funds) increased from \$154,202,165 in 1928 to \$745,038,679 in 1956. In the former year the total of estates, trust and agency funds administered amounted to \$1,077,953,643 and in 1956 to \$5,133,928,228.

Functions of Loan Companies.—The principal function of loan companies is the lending of funds on first-mortgage security, the money thus made available for development purposes being secured mainly by the sale of debentures to the investing public and by savings department deposits. The extent of investments in mortgages by federal and provincial loan companies may be gauged by the following figures: total assets of such companies for the years 1955 and 1956 amounted to \$410,593,640 and \$437,169,171, respectively, which amounts include mortgage loans of \$296,466,101 and \$331,433,425, respectively; thus, the resulting percentages of mortgages to total assets for those years were approximately 72 p.c. and 76 p.c., respectively.

Functions of Trust Companies.—Trust companies act as executors, trustees and administrators under wills or by appointment, as trustees under marriage or other settlements, as agents or attorneys in the management of the estates of the living, as guardians of minor or incapable persons, as financial agents for municipalities and companies, as transfer agents and registrars for stocks and bond issues, as trustees for bond issues, and, where so appointed, as authorized trustees in bankruptcy. Such companies receive deposits for investment but the investing and lending of such deposits and of actual trust funds are restricted by law.

* Revised under the direction of K. R. MacGregor, Superintendent of Insurance, Department of Insurance, Ottawa.

Statistics of Loan and Trust Companies.—A summary of operations of provincial and federal loan and trust companies is given in Table 1. As a result of the nature of the operations of the latter companies, which are intimately connected with the matter of probate, the larger trust companies usually choose to operate under provincial charters and the provincial figures represent much larger amounts than those of the federal companies.

The figures for federal loan companies include companies chartered by the Government of Nova Scotia which, by arrangement, come under inspection by the federal Department of Insurance. The data for federal trust companies cover companies chartered by the Governments of Nova Scotia, New Brunswick and Manitoba for the same reason.

**1.—Operations of Provincial and Federal Loan and Trust Companies as at
Dec. 31, 1955 and 1956**

Item	1955			1956		
	Provincial Companies ¹	Federal Companies	Total	Provincial Companies ¹	Federal Companies	Total
	\$	\$	\$	\$	\$	\$
Loan Companies—						
Assets (book values).....	129,589,371	281,004,269	410,593,640	140,453,366	296,715,805	437,169,171
Liabilities to the public.....	97,917,400	245,606,324	343,523,724	105,577,295	258,245,799	363,823,094
Capital Stock—						
Authorized.....	24,002,250	52,500,000	76,502,250	27,350,150	52,500,000	79,850,150
Subscribed.....	14,261,131	15,489,300	29,750,431	15,430,343	16,440,600	31,870,943
Paid up.....	9,890,439	16,545,334	26,435,773	10,929,428	17,622,027	28,551,455
Reserve and contingency funds....	16,694,396	17,458,300	34,152,696	18,149,014	19,271,324	37,420,338
Other liabilities to shareholders..	5,087,136	1,072,496	6,159,632	5,797,629	1,178,155	6,975,784
Total liabilities to shareholders...	31,671,971	35,076,130	66,748,101	34,876,071	38,071,506	72,947,577
Net profits realized during year ² ..	2,342,227	4,614,627	6,956,854	3,044,336	5,022,098	8,066,434
Trust Companies—						
Assets (book values)—						
Company funds.....	88,360,564	32,090,504	120,451,068	91,554,381	36,690,878	128,245,259
Guaranteed funds.....	437,168,231	159,235,891	596,404,122	446,448,674	170,344,746	616,793,420
Totals, Assets.....	525,528,795	191,326,395	716,855,190	538,003,055	207,035,624	745,038,679
Estates, trust, and agency funds...	3,985,662,299	734,670,479	4,720,332,778	4,318,560,879	815,367,349	5,133,928,228
Capital Stock—						
Authorized.....	54,105,000	32,000,000	86,105,000	56,523,000	33,000,000	89,523,000
Subscribed.....	31,704,460	15,766,320	47,470,780	31,486,930	17,674,130	49,161,060
Paid up.....	30,932,370	15,407,916	46,340,286	30,901,805	17,327,010	48,228,815
Reserve and contingency funds....	35,496,257	12,267,502	47,763,759	36,661,034	11,911,366	48,572,400
Unappropriated surpluses.....	6,464,682	2,405,761	8,870,443	8,041,408	2,414,427	10,455,835
Net profits realized during year ² ..	8,227,941	3,636,706	11,864,647	8,407,298	3,654,719	12,062,017

¹ Excludes one loan company incorporated under the laws of Quebec, the capital stock and debentures of which have been issued largely outside Canada.

² Net profits are before income taxes.

2.—Assets and Liabilities of Loan Companies 1952-56

Item	CHARTERED BY GOVERNMENT OF CANADA ¹				
	1952	1953	1954	1955	1956
Assets	\$	\$	\$	\$	\$
Real estate ²	6,148,146	5,949,482	5,768,982	5,699,194	7,196,820
Loans on real estate.....	146,071,337	159,833,300	178,968,416	200,118,391	227,370,747
Loans on securities.....	107,585	164,364	139,250	155,562	180,793
Bonds and debentures.....	34,958,078	31,929,613	48,807,414	50,187,515	36,623,327
Stocks.....	11,353,848	10,877,532	12,163,845	14,058,759	16,246,819
Cash.....	6,906,488	7,022,432	7,916,073	8,781,617	7,015,991
Totals, Assets³.....	206,973,153	217,019,970	255,446,553	281,004,269	296,715,805
Liabilities					
Liabilities to Shareholders—					
Capital paid up.....	15,981,759	16,042,255	16,080,222	16,545,334	17,622,027
Reserves.....	14,894,345	15,100,186	16,604,475	17,458,300	19,271,324
Total Liabilities to Shareholders⁴....	31,712,347	32,354,356	33,604,179	35,076,130	38,071,506
Liabilities to the Public—					
Debentures.....	91,492,226	98,618,936	120,816,931	130,264,215	146,839,303
Deposits.....	81,669,175	83,382,889	97,696,275	111,557,968	106,671,012
Total Liabilities to the Public⁵.....	175,107,452	184,448,041	221,612,649	245,606,324	258,245,799
Totals, Liabilities.....	206,819,799	216,802,397	255,216,828	280,682,454	296,317,305
CHARTERED BY PROVINCES⁶					
	1953	1954	1955	1956	
Assets	\$	\$	\$	\$	
Real estate ²	1,154,202	1,193,695	856,504	986,728	
Loans on real estate.....	77,786,970	87,292,830	96,347,710	104,062,678	
Loans on securities.....	981,122	1,019,631	1,035,965	1,194,450	
Bonds and debentures.....	20,597,703	22,094,106	23,017,586	26,377,850	
Stocks.....	2,263,272	2,298,200	2,782,701	3,176,295	
Cash.....	3,198,296	3,274,065	4,261,283	3,837,228	
Totals, Assets³.....	106,571,244	117,936,572	129,589,371	140,453,366	
Liabilities					
Liabilities to Shareholders—					
Capital paid up.....	10,134,967	9,808,065	9,890,439	10,929,428	
Reserves.....	13,985,035	15,090,685	16,694,396	18,149,014	
Total Liabilities to Shareholders⁴.....	28,453,777	29,852,739	31,671,971	34,876,071	
Liabilities to the Public—					
Debentures.....	23,751,608	26,556,895	28,696,549	30,139,135	
Deposits.....	52,481,156	59,683,140	67,587,267	73,543,730	
Total Liabilities to the Public⁵.....	78,117,467	88,083,833	97,917,400	105,577,295	
Totals, Liabilities.....	106,571,244	117,936,572	129,589,371	140,453,366	

¹ Includes companies chartered by the Government of Nova Scotia which by arrangement are inspected by the federal Department of Insurance. ² Book value of real estate for company use and other real estate.

³ Includes interest due and accrued and other assets. ⁴ Includes other liabilities to shareholders.

⁵ Includes other liabilities to the public. ⁶ Exclusive of Nova Scotia.

3.—Assets and Liabilities of Trust Companies 1952-56

Item	CHARTERED BY GOVERNMENT OF CANADA ¹				
	1952	1953	1954	1955	1956
	\$	\$	\$	\$	\$
Assets					
Company Funds ^{2,3}	28,731,666	29,629,779	29,451,872	32,090,504	36,699,878
Real estate ⁴	2,526,037	2,376,927	2,181,017	2,446,182	2,856,671
Loans on real estate.....	5,867,035	5,904,007	6,315,655	6,947,633	9,399,887
Loans on securities.....	763,618	714,659	610,784	593,086	507,486
Bonds and debentures.....	11,675,897	12,149,590	11,584,230	12,538,063	14,467,349
Stocks.....	4,632,875	4,544,646	4,498,381	5,314,098	5,500,185
Cash.....	2,060,423	2,423,362	3,156,458	3,136,361	2,506,028
Guaranteed Funds ^{2,3}	107,429,793	110,366,037	140,601,795	159,235,891	170,344,746
Loans on real estate.....	44,504,345	49,322,834	59,027,501	78,009,884	90,669,596
Loans on securities.....	4,151,541	3,419,930	5,577,269	4,875,283	6,610,998
Bonds and debentures.....	49,928,453	50,258,820	68,610,990	68,265,804	60,310,896
Stocks.....	1,236,757	1,454,318	1,898,885	2,127,899	1,561,694
Cash.....	6,760,472	5,052,409	4,273,214	4,592,425	9,731,317
Liabilities					
Company Funds⁵	28,583,274	29,048,202	28,850,642	31,905,971	36,381,834
Capital paid-up.....	14,862,123	15,097,718	14,653,624	15,407,916	17,327,010
Reserves.....	9,178,309	9,301,381	10,822,267	12,267,502	11,911,366
Guaranteed Funds—Trust Deposits and Certificates.....	107,429,793	110,366,037	140,601,795	159,235,891	170,344,746
CHARTERED BY PROVINCES⁶					
Assets					
Company Funds ^{2,3}	75,097,721	81,569,089	83,140,092	88,360,564	91,554,381
Real estate ⁴	5,263,529	7,199,260	7,823,819	8,411,623	8,763,967
Loans on real estate.....	14,306,251	13,743,299	13,016,509	14,060,244	12,812,273
Loans on securities.....	7,754,667	6,718,451	8,799,177	9,131,608	11,217,620
Bonds and debentures.....	24,134,845	27,229,386	25,690,753	25,481,913	24,123,965
Stocks.....	16,273,994	19,015,061	19,996,998	22,151,675	24,905,523
Cash.....	3,152,062	3,858,071	3,891,065	4,760,662	4,662,121
Guaranteed Funds²	265,257,222	268,175,625	383,697,760	437,168,231	446,448,674
Loans on real estate.....	72,005,308	80,943,551	99,835,875	128,630,198	155,096,475
Loans on securities.....	11,332,357	10,873,145	20,265,826	24,700,574	19,823,245
Bonds and debentures.....	159,557,075	159,394,731	239,473,762	262,047,774	238,455,688
Stocks.....	2,092,145	1,642,565	978,378	1,286,070	2,212,005
Cash.....	19,916,400	14,716,402	21,553,634	28,110,462	28,037,961
Liabilities					
Company Funds⁵	75,097,721	81,569,089	83,140,092	88,360,564	91,554,381
Capital paid-up.....	28,804,860	29,414,810	29,870,940	30,932,370	30,901,805
Reserves.....	27,360,303	29,591,322	31,674,933	35,496,257	36,661,034
Guaranteed Funds—Trust Deposits and Certificates.....	265,257,222	268,175,625	383,697,760	437,168,231	446,448,674

¹ Includes companies chartered by the Governments of Nova Scotia, New Brunswick and Manitoba which by arrangement are inspected by the federal Department of Insurance. ² Includes other assets. ³ Includes interest due and accrued. ⁴ Book value of real estate for company use and other real estate. ⁵ Includes other company fund liabilities. ⁶ Chartered by all provinces except Nova Scotia, New Brunswick and Manitoba (see footnote 1).

4.—Estates, Trust and Agency Funds of Trust Companies Chartered by or Supervised by the Federal Government and by Provincial Governments as at Dec. 31, 1947-56

Year	Federal Companies ¹	Provincial Companies ²	Total	Year	Federal Companies ¹	Provincial Companies ²	Total
	\$	\$	\$		\$	\$	\$
1947.....	480,931,822	2,735,930,892	3,216,862,714	1952.....	588,550,279	3,383,650,088	3,972,200,367
1948.....	520,860,737	2,791,584,378	3,312,445,115	1953.....	631,231,540	3,470,781,614	4,102,013,154
1949.....	560,080,611	2,827,988,797	3,388,069,408	1954.....	663,520,956	3,734,874,516	4,398,395,472
1950.....	494,636,746	3,126,058,749	3,620,695,495	1955.....	734,670,479	3,985,662,299	4,720,332,778
1951.....	543,983,754	3,282,558,573	3,826,542,327	1956.....	815,367,349	4,318,560,879	5,133,928,228

¹ Includes companies chartered by the Governments of Nova Scotia, New Brunswick and Manitoba which, by arrangement, are inspected by the federal Department of Insurance. ² Excludes provincial companies of Nova Scotia, New Brunswick and Manitoba which are included in federal companies.

Section 2.—Licensed Small Loans Companies and Licensed Money-Lenders*

Licensed small loans companies and licensed money-lenders are subject to the provisions of the Small Loans Act (R.S.C. 1952, c. 251), an enactment of the Parliament of Canada regulating personal loans not in excess of \$500 made on the security of promissory notes of borrowers. Most of these notes are additionally secured by endorsements or chattel mortgages. The Act permits maximum rates of cost of loan, including charges of every kind, of 2 p.c. per month to licensed lenders and 12 p.c. per annum to unlicensed lenders. The small loans companies—four in number—were incorporated by special Acts of the Parliament of Canada, the first such company commencing business in 1928. Money-lenders, of which there are 66, are made up of companies otherwise incorporated and include a few partnerships and individuals. Table 5 gives the combined financial experience of small loans companies and licensed money-lenders for the years 1953-56.

* Further details are given in the Department of Insurance report *Small Loans Companies and Money-Lenders* for the year ended Dec. 31, 1956.

5.—Assets and Liabilities of Small Loans Companies and Money-Lenders 1953-56

Assets and Liabilities	1953	1954	1955	1956
	\$	\$	\$	\$
Assets.....	154,737,883	172,173,681	208,517,770	262,386,415
Small loan balances.....	81,840,415	88,822,891	88,844,506	88,428,203
Balances, large loans and other contracts.....	66,082,405	75,824,672	109,530,841	160,743,235
Cash.....	3,857,635	3,955,094	4,975,980	6,308,752
Other.....	2,957,428	3,571,024	5,166,443	6,906,225
Liabilities.....	154,737,883	172,173,681	208,517,770	262,386,415
Borrowed money.....	109,162,651	122,688,252	149,688,502	191,697,344
Reserves for losses.....	3,794,272	4,263,653	5,028,544	5,607,582
Paid-up capital.....	9,456,449	10,383,509	12,264,662	13,978,275
Surplus paid in by shareholders.....	12,222,570	11,587,820	11,578,629	12,078,629
Other.....	20,101,941	23,250,447	29,957,433	39,024,585

The combined companies showed a moderate decrease in the number and amount of small loans made during 1956 as compared with 1955, and reported a slight increase in the number and amount of small loans balances outstanding in the same comparison. During 1956, 844,348 small loans valued at \$184,293,692 were made as against 860,134 loans amounting to \$191,248,350 in 1955. The average small loan was approximately \$210 in 1956. At the end of that year small loans outstanding numbered 543,394 for an amount of \$88,428,203 or an average of \$163; at the end of 1955 the outstanding loans numbered 529,704 and amounted to \$88,844,506 or an average of \$168 per loan.

Section 3.—Sales of Canadian Bonds*

Previous editions of the Year Book trace the sales of Canadian bonds to the end of 1954. This review continues through 1955 and 1956 the record of new issues placed.

During the period under review, the principal trend was caused by a harder monetary policy which began in the latter part of 1955 and was continued during the following year. A decline in prices and a rise in yields, particularly in the short-term and medium-term issues, provided an opportunity for discerning investors to increase the proportion of high-grade bonds in their portfolios. This development constituted a 'prime movement' on the bond market which was felt particularly by large institutional investors.

In the flotation of new issues, offerings of Canadian⁷ bonds and debentures in 1955 (excluding issues with a term to maturity of less than one year) totalled \$2,661,516,323, down sharply from 1954. In 1956, however, the comparable total increased considerably to \$3,093,670,267 although it was still under the all-time peak of \$4,468,983,364 in 1954. These declines were mainly the result of a sharp drop in Government of Canada financing from \$3,200,540,900 in 1954 to \$1,348,500,000 in 1955 and \$1,357,000,000 in 1956. On the other hand, provincial financing (including provincial guaranteed issues) and municipal financing (including parochial school issues) were both higher in 1955 and 1956 than in 1954. In this respect, all provincial financing totalled \$434,165,000 in 1955 and \$557,888,000 in 1956 compared with \$400,916,000 in 1954, while all municipal financing (exclusive of that guaranteed by the provinces) totalled \$293,055,423 in 1955 and \$318,597,867 in 1956 compared with \$260,993,664 in 1954. As far as new issues in the corporate field were concerned, there was a decrease in 1955 at \$585,795,900 but a marked increase in 1956 at \$860,184,400 when compared with the total of \$606,532,800 in 1954.

In the field of federal financing for 1955 and 1956, very considerable new capital was acquired by public subscription to Canada Savings Bonds Series Ten (Nov. 1, 1955) and Series Eleven (Nov. 1, 1956). In common with all other Canadian Savings Loan issues, these flotations were limited to purchases by individuals only, as distinct from both corporate and individual purchases allowed for the Victory Loan issues of 1941 to 1945 inclusive, and the two War Loans of 1940.

As a distinctive feature, not found in previous issues, the Series Eleven Savings Loan issue of 1956 paid interest on a sliding scale—the first payment being made after six months and annually thereafter. This scale called for a rate of $3\frac{1}{4}$ p.c. payable on two coupons for the first year and a half; $3\frac{1}{2}$ p.c. payable on two coupons for the next two years; $3\frac{3}{4}$ p.c. payable on two coupons for the next two years; and 4 p.c. payable on seven coupons thereafter to a maturity on May 1, 1969. Altogether, an average rate of 3.76 p.c. made this security a most attractive issue and caused a greater exchange of previous issues into Series Eleven than for any of the former Savings Loans.

* Prepared by E. C. Gould, Financial Editor, *The Monetary Times*.

6.—Sales of and Applications for Federal Government Bonds, Feb. 1, 1940 to Nov. 1, 1956

(Source: *The Monetary Times*)

Type and Date of Loan	Purchases by Individuals	Purchases by Corporations	Total Cash Sales	Applications
	\$'000	\$'000	\$'000	No.
War Loans—				
Feb. 1, 1940.....	132,000	68,000	200,000	178,363
Oct. 1, 1940.....	113,000	187,000	300,000	150,890
Victory Loans—				
June 15, 1941.....	279,500	450,900	730,400	968,259
Mar. 1, 1942.....	335,600	507,500	843,100	1,681,267
Nov. 1, 1942.....	374,600	616,800	991,400	2,032,154
May 1, 1943.....	529,500	779,200	1,308,700	2,668,420
Nov. 1, 1943.....	599,700	775,300	1,375,000	3,033,051
May 1, 1944.....	641,500	763,500	1,405,000	3,077,123
Nov. 1, 1944.....	766,400	751,200	1,517,600	3,327,315
May 1, 1945.....	836,300	732,600	1,563,619 ¹	3,178,275
Nov. 1, 1945.....	1,221,342	801,132	2,027,487 ¹	2,947,636
Savings Loans—²	\$	—	\$	
Nov. 1, 1946.....	535,285,550	—	535,285,550	1,248,444
Nov. 1, 1947.....	287,733,100	—	287,733,100	910,742
Nov. 1, 1948.....	260,491,150	—	260,491,150	862,686
Nov. 1, 1949.....	320,200,000	—	320,200,000	1,015,579
Nov. 1, 1950.....	285,600,000	—	285,600,000	963,048
Nov. 1, 1951.....	394,642,400	—	394,642,400	986,900
Nov. 1, 1952.....	380,761,100	—	380,761,100	982,274
Nov. 1, 1953.....	850,548,900	—	850,548,900	1,267,506
Nov. 1, 1954.....	800,540,900	—	800,540,900	1,175,264
Nov. 1, 1955.....	729,100,000	—	729,100,000	1,180,000
Nov. 1, 1956.....	850,000,000	—	850,000,000	1,234,000

¹ Department of Finance figures.² Total subscriptions were limited to \$2,000 for any one individual for the 1946 issue, \$1,000 for the issues of 1947-50 inclusive and \$5,000 for the issues of 1951-56. Figures for the issues 1946-55 are for the entire loans, i.e., either to the year-end or to the closing date within the year or in subsequent years. The figure for Series Eleven (1956) is approximate as at mid-July 1957.

Excluded from Table 6 on federal financing are the short-term issues in the form of treasury bills with a maturity of less than one year. These totals amounted to \$4,580,500,000 in 1955 and \$6,420,000,000 in 1956. If included, they would bring the grand total of all federal borrowing to \$5,929,000,000 in 1955 and \$7,777,000,000 in 1956. Comparable figure for 1954 was \$6,980,540,900.

Although Canadian short-term financing of less than one year dates back to the 1930's when Government of Canada treasury bills were first introduced, it did not become of particular importance outside the banking system until 1954. This development arose because an increasing number of corporations and other investors turned to securities of less than one year for the profitable employment of short-term surplus funds not required for immediate business needs. An expanding market for treasury bills, in turn, has enabled the Government of Canada to increase substantially the total of bills outstanding with important gains in terms of convenience and economy.

On Nov. 1, 1956, the Bank of Canada announced that there would no longer be periodic changes in the Bank Rate but that it would be maintained at one-quarter of one percent above the average yield price received at each week's sale of 91-day treasury bills. This change was intended to make the Bank Rate more flexible and responsive to changing conditions in the short-term money market. It was also felt by some observers that the previous method of making changes in the Bank Rate caused certain disturbances and dislocations that could be avoided by continuous smaller adjustments.

In the field of combined direct and guaranteed financing by Canadian provinces, the totals for both 1955 and 1956 were higher than the total of 1954. Total financing in this category amounted to \$434,165,000 in 1955 of which \$222,349,000 was direct and \$211,816,000 was guaranteed municipal financing by various provincial governments. Comparable figures for 1956 show total financing of \$557,888,000 of which \$279,350,000 was direct and \$278,538,000 was guaranteed by various provincial governments. These totals compare with \$400,916,000 in 1954 of which \$226,032,000 was direct and \$174,884,000 represented guaranteed provincial financing.

Provinces which directly entered the bond market in 1955 and 1956 were:—

<i>Province</i>	<i>Month</i>	<i>Amount</i>	<i>Province</i>	<i>Month</i>	<i>Amount</i>
1955—		\$'000	1956—		\$'000
New Brunswick.....	January.....	11,500	Nova Scotia.....	January.....	12,000
New Brunswick.....	February.....	6,849	Prince Edward Island.....	February.....	1,700
Saskatchewan.....	April.....	10,000	Manitoba.....	March.....	12,000
Quebec.....	April.....	23,250	New Brunswick.....	March.....	7,400
Newfoundland.....	April.....	16,000	New Brunswick.....	April.....	5,000
Nova Scotia.....	May.....	10,000	Ontario.....	April.....	50,000
Quebec.....	June.....	37,750	Ontario.....	May.....	60,000
Ontario.....	July.....	50,000	New Brunswick.....	September.....	6,000
Saskatchewan.....	September.....	10,000	Saskatchewan.....	October.....	8,000
New Brunswick.....	September.....	10,000	New Brunswick.....	November.....	6,500
Saskatchewan.....	December.....	25,000	Ontario.....	November.....	50,000
Nova Scotia.....	December.....	12,000	Manitoba.....	December.....	10,000
			Nova Scotia.....	December.....	10,000
			Saskatchewan.....	December.....	15,750
			Quebec.....	December.....	25,000
TOTAL, 1955.....		222,349	TOTAL, 1956.....		279,350

In the field of direct municipal financing (i.e., exclusive of municipal financing guaranteed by various provinces) the market for new issues held up well in both 1955 and 1956, continuing the postwar trend. Local improvements constituted the principal purposes for such borrowing with the most important needs for new schools and waterworks. There were instances, however, when tight money conditions created problems for investment dealers so that some issues had to be postponed or the terms of the offerings altered to make them more attractive to buyers. When flotations for municipal parochial school purposes are included, total municipal sales amounted to \$293,055,423 in 1955 and \$318,597,867 in 1956, both up from a total of \$260,993,664 in 1954. The municipalities of Montreal, Toronto, Winnipeg, Hamilton, Regina, Vancouver, Kingston and Ottawa were among the most important borrowers.

During 1955 and 1956, corporate financing totalled \$585,795,900 and \$860,184,400, respectively, compared with \$606,632,800 in 1954. Among issues of particular interest, the International Bank for Reconstruction and Development offered \$15,000,000, 3½ p.c., ten-year Canadian dollar bonds which were very well received by investors. During the same period, there was a more active new issue market in uranium corporate bonds with a number of fairly large flotations. Debenture issues of pipeline and oil-producing companies were also popular in 1956 as a result of further discoveries in Western Canada and also perhaps of unsettled conditions in the Middle East.

A noteworthy issue in the miscellaneous field consisted of \$15,000,000 Commonwealth of Australia, 4 p.c., fifteen-year bonds. This issue was offered in November 1955, the first time an Australian bond issue was ever placed in Canada.

During the tight money period of the latter part of 1955 and 1956, underwriters of many new bond issues displayed considerable ingenuity in tailoring them to meet the requirements of the market and the needs of the issuer. In this regard, a growing number of conversion privileges and stock purchase warrants were attached to assist in the sale of securities while a number of major Canadian corporations raised equity capital through the issuance of rights to shareholders. In addition, a growing number of borrowers

accepted the exchange risk by going to the New York market where, at times, funds were more readily available. As a result, Canadian bond sales in the United States increased considerably in 1956 although they were down somewhat for the entire year 1955 compared with 1954. Total sales on the American market for the three years were \$470,532,982 in 1956, \$154,563,000 in 1955 and \$173,598,000 in 1954. The drop in 1955 was accounted for by the fact that money was fairly plentiful in Canada in the earlier months of that year. Indeed, most of the 1955 total of sales in the United States came in the latter months after the effect of credit restrictions was felt.

As a general result of monetary restrictions, the year 1956 was a most unusual one for new bond sales in Canada. In face of an expanding economy, the demand for money became so strong that not only did the cost factor rise very substantially but, in some instances, ready funds were not obtainable at any price. As a result, many borrowers found it difficult or impossible to finance issues they would have regarded as normal borrowing in previous years. Indeed, it is necessary to go back a quarter of a century or more to find a year when Canadian corporations and municipalities were forced to postpone new capital issues because of the shortage and consequent high cost of funds on the Canadian bond market.

7.—Sales of Canadian Bonds by Class of Bond and Country of Sale 1947-56

(SOURCE: *The Monetary Times*)

NOTE.—Figures from 1904 are given in the corresponding table of previous Year Books beginning with the 1933 edition.

Year	CLASS OF BOND					
	Federal ¹	Provincial	Municipal	Parochial and Miscellaneous	Corporation	Total
	\$	\$	\$	\$	\$	\$
1947.....	293,333,100	229,562,000	238,887,410	14,968,600	379,674,500	1,156,425,610
1948.....	445,491,150	312,619,500	84,014,291	21,010,000	310,506,000	1,173,640,941
1949.....	790,200,000	449,347,000	134,796,184	23,853,200	285,268,000	1,683,464,384
1950.....	2,167,600,000	373,824,500	150,369,281	30,466,369	431,180,303	3,153,440,453
1951.....	594,642,400	369,532,000	196,438,916	37,967,921	451,630,000	1,650,211,237
1952.....	830,761,100	426,973,000	147,690,940	49,264,100	573,539,000	2,028,228,140
1953.....	1,950,548,900	436,616,900	186,784,460	35,242,605	336,295,800	2,945,488,665
1954.....	3,200,540,900	400,916,000	209,640,778	51,352,886	606,532,800	4,468,983,364
1955.....	1,348,500,000	434,165,000	226,991,573	66,063,850	585,795,900	2,661,516,323
1956.....	1,357,000,000	557,888,000	265,936,167	52,661,700	860,184,400	3,093,670,267

Year	COUNTRY OF SALE			
	Canada ¹	United States	United Kingdom	Total
	\$	\$	\$	\$
1947.....	1,068,114,610	88,311,000	—	1,156,425,610
1948.....	1,023,640,941	150,000,000	—	1,173,640,941
1949.....	1,543,464,384	140,000,000	—	1,683,464,384
1950.....	2,980,740,453	172,700,000	—	3,153,440,453
1951.....	1,266,188,237	384,023,000	—	1,650,211,237
1952.....	1,743,578,115	284,650,025	—	2,028,228,140
1953.....	2,638,889,450	306,599,215	—	2,945,488,665
1954.....	4,295,385,364	173,598,000	—	4,468,983,364
1955.....	2,506,953,323	154,563,000	—	2,661,516,323
1956.....	2,623,137,285	470,532,982	—	3,093,670,267

¹ Excludes treasury bills, deposit certificates and other financing for a term of less than one year.

CHAPTER XXVII.—INSURANCE*

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

Insurance, for the purpose of statistical analysis, is usually classified as life, fire and casualty. Most companies operate under Federal Government registration although some have provincial licences only. Also many fraternal orders and societies are engaged in this kind of business. The special articles relating to insurance that have appeared in previous editions of the Year Book are listed in Part II of Chapter XXIX under the heading "Insurance".

Section 1.—Life Insurance†

Life insurance in force in Canada with companies registered by the Federal Government (exclusive of fraternal benefit societies) was over \$25,452,000,000 at the end of 1956, an increase of over \$2,317,000,000 during the year. The ratio of gain in business in force expressed as a percentage of the amount in force at the beginning of the same year, which ranged between 9.0 and 11.2 during the 1946-55 period, reached 14.3p.c. in 1956 its highest point since the end of World War II.

Year	In Force at Beginning of Year	Increase in Force for the Year	Per- centage Gain
	\$	\$	
1930.....	6,157,000,000	335,000,000	5.4
1935.....	6,221,000,000	38,000,000	0.6
1940.....	6,776,000,000	200,000,000	2.9
1945.....	9,140,000,000	612,000,000	6.7
1946.....	9,752,000,000	1,061,000,000	10.9
1947.....	10,813,000,000	1,089,000,000	10.1
1948.....	11,902,000,000	1,204,000,000	10.1
1949.....	13,106,000,000	1,303,000,000	9.9
1950.....	14,409,000,000	1,337,000,000	9.3
1951.....	15,746,000,000	1,490,000,000	9.5
1952.....	17,236,000,000	1,855,000,000	10.8
1953.....	19,091,000,000	2,136,000,000	11.2
1954.....	21,227,000,000	1,908,000,000	9.0
1955.....	23,135,000,000	2,317,000,000	10.0
1956.....	25,452,000,000	3,635,000,000	14.3

* Material in this Chapter, except as otherwise indicated, has been revised under the direction of K. R. MacGregor, Superintendent of Insurance, Department of Insurance, Ottawa.

† All the amounts given in the tables of this Section are net amounts after deduction of reinsurance ceded.

Subsection 1.—Total Registered Life Insurance in Force in Canada

Table 1 summarizes the volume of life insurance business transacted in Canada in 1954, 1955 and 1956 by Canadian, British and foreign life insurance companies and by fraternal societies, whether registered by the Federal Government or licensed by the provinces.

1.—Life Insurance Transacted in Canada 1954-56

Business Transacted by—	Insurance Premiums	Claims ¹	New Policies Effectuated	Insurance in Force, Dec. 31
	\$	\$	\$	\$
1954				
Federal Registrations.....	492,778,074	158,641,215	2,705,457,929	23,482,120,974
Life companies.....	486,409,812	154,481,756	2,656,722,341	23,134,578,868
Fraternal societies.....	6,368,262	4,159,459	48,735,588	347,542,106
Provincial Licensees.....	27,842,856	8,932,337	280,919,279	1,290,183,490
Provincial Companies within Province by which they are Incorporated—				
Life companies.....	16,992,734	4,259,389	196,414,288	811,038,511
Fraternal societies.....	6,383,185	2,772,022	46,146,117	277,200,589
Provincial Companies in Provinces other than those by which they are Incorporated—				
Life companies.....	2,354,074	576,644	20,352,957	94,627,831
Fraternal societies.....	2,112,863	1,324,282	18,005,917	107,316,559
Totals, 1954.....	520,620,930	167,573,552	2,986,377,208	24,772,304,464
Canadian Life Companies—				
Federal.....	325,154,008	104,470,590	1,823,008,957	15,765,916,390
Provincial.....	19,346,808	4,836,033	216,767,245	905,666,342
Canadian Fraternal Societies—				
Federal.....	2,935,749	2,427,404	33,152,586	203,898,002
Provincial.....	8,496,048	4,096,304	64,152,034	384,517,148
British life companies.....	14,145,587	3,893,600	104,306,211	596,756,619
Foreign life companies.....	147,110,217	46,117,566	729,407,173	6,771,905,859
Foreign fraternal societies.....	3,432,513	1,732,055	15,583,002	143,644,104
1955				
Federal Registrations.....	526,723,999	165,862,878	3,213,196,875	25,817,466,823
Life companies.....	520,098,190	161,883,205	3,154,670,863	25,451,571,525
Fraternal societies.....	6,625,809	3,979,673	58,526,012	365,895,298
Provincial Licensees.....	29,182,573	8,520,674	351,600,976	1,497,587,789
Provincial Companies within Province by which they are Incorporated—				
Life companies.....	19,175,465	4,560,952	268,187,266	1,052,896,304
Fraternal societies.....	4,819,255	2,245,023	35,458,980	211,247,923
Provincial Companies in Provinces other than those by which they are Incorporated—				
Life companies.....	2,814,786	405,440	30,702,596	119,780,515
Fraternal societies.....	2,373,067	1,309,259	17,252,134	113,663,047
Totals, 1955.....	555,906,572	174,383,552	3,564,797,851	27,315,054,612
Canadian Life Companies—				
Federal.....	347,407,718	107,953,211	2,149,050,981	17,401,229,498
Provincial.....	21,990,251	4,966,392	298,889,862	1,172,676,819

For footnote, see end of table.

1.—Life Insurance Transacted in Canada 1954-56—concluded

Business Transacted by—	Insurance Premiums	Claims ¹	New Policies Effectuated	Insurance in Force, Dec. 31
	\$	\$	\$	\$
1955—concluded				
Canadian Fraternal Societies—				
Federal.....	2,959,276	2,434,037	40,176,418	215,050,782
Provincial.....	7,192,322	3,554,282	52,711,114	324,910,970
British life companies.....	16,528,219	3,717,408	124,429,637	691,660,141
Foreign life companies.....	156,162,253	50,212,586	881,190,245	7,358,681,886
Foreign fraternal societies.....	3,666,533	1,545,636	18,349,594	150,844,516
1956				
Federal Registrations.....	571,878,944	184,926,378	4,187,402,603	29,486,692,163
Life companies.....	564,723,434	180,852,023	4,119,767,664	29,087,416,143
Fraternal societies.....	7,155,510	4,074,355	67,634,939	399,276,020
Provincial Licensees.....	33,082,660	10,369,482	351,521,176	1,779,673,222
Provincial Companies within Province by which they are Incorporated—				
Life companies.....	22,386,624	5,956,099	255,503,923	1,279,801,907
Fraternal societies.....	5,068,198	2,304,339	39,591,754	233,106,842
Provincial Companies in Provinces other than those by which they are Incorporated—				
Life companies.....	3,334,979	690,630	39,799,924	151,406,232
Fraternal societies.....	2,292,859	1,418,414	16,625,575	115,358,241
Totals, 1956.....	604,961,604	195,295,860	4,538,923,779	31,266,365,385
Canadian Life Companies—				
Federal.....	377,531,692	120,978,895	2,697,441,456	19,783,194,985
Provincial.....	25,721,603	6,646,729	295,303,847	1,431,208,139
Canadian Fraternal Societies—				
Federal.....	3,420,452	2,453,467	46,481,330	238,087,472
Provincial.....	7,361,057	3,722,753	56,217,329	348,465,083
British life companies.....	19,759,474	5,066,155	159,182,181	819,968,279
Foreign life companies.....	167,432,268	54,806,973	1,263,144,027	8,484,252,879
Foreign fraternal societies.....	3,735,058	1,620,888	21,153,609	161,188,548

¹ Death, disability and maturity of insurance and annuity contracts; for fraternal benefit societies annuity contracts do not apply.

Subsection 2.—Operational Statistics of Life Insurance Companies under Federal Registration

The amount of life insurance in force in Canada has shown an almost continuous advance year by year since the beginning of the record in 1869. The amount per capita of the estimated population has almost doubled since 1947—evidence of the general recognition of the value of life insurance for the adequate protection of dependants against misfortune. During 1956, life insurance business was transacted in Canada by 82 active companies having federal registration, including 32 Canadian, 8 British and 30 foreign companies. In addition there were 5 British and 5 foreign companies which wrote no new insurance during the year, their business being confined to policies already on their books. Two foreign companies registered in 1956 had written no business in Canada.

The operations analysed in the tables of this Subsection, with the exception of Table 6, include only those companies under federal registration and are exclusive of fraternal organizations and provincial licensees. However, as indicated in Table 1, operations of the companies included account for about 93 p.c. of the life insurance in force in Canada.

2.—Life Insurance in Force and Effectuated in Canada by Companies under Federal Registration, Decennially 1880-1940 and Annually 1941-56

NOTE.—Figures for 1889-1900 are given at p. 958 of the 1938 Year Book, and for 1901-39 at p. 855 of the 1942 edition. Statistics of fraternal society insurance, excluded here, are given at pp. 1172-1174.

Year	Insurance in Force Dec. 31				Insurance in Force per Capita ¹	New Insurance Effectuated during Year
	Canadian Companies	British Companies	Foreign Companies	Total		
	\$	\$	\$	\$	\$	\$
1880.....	37,838,518	19,789,863	33,643,745	91,272,126	21.45	13,906,887
1890.....	135,218,990	31,613,730	81,591,847	248,424,567	51.98	39,802,956
1900.....	267,151,086	39,485,344	124,433,416	431,069,846	81.32	67,729,115
1910.....	565,667,110	47,816,775	242,629,174	856,113,059	122.51	150,785,305
1920.....	1,664,348,605	76,883,090	915,793,798	2,657,025,493	310.55	630,110,900
1930.....	4,319,370,209	117,410,860	2,055,502,125	6,492,283,194	636.00	884,749,748
1940.....	4,609,213,977	145,603,299	2,220,505,184	6,975,322,460	612.89	590,205,536
1941.....	4,835,925,659	145,597,309	2,367,027,774	7,348,550,742	638.62	688,344,283
1942.....	5,184,568,369	152,289,487	2,538,897,449	7,875,755,305	675.80	818,558,946
1943.....	5,586,515,285	162,287,617	2,785,290,816	8,534,093,718	723.53	887,522,851
1944.....	6,001,984,634	171,997,834	2,965,501,763	9,139,484,231	765.07	900,501,491
1945.....	6,440,615,383	183,779,511	3,126,645,941	9,751,040,835	807.74	1,002,576,955
1946.....	7,201,285,815	205,626,216	3,405,480,833	10,812,392,864	879.63	1,393,522,667
1947.....	7,964,185,291	238,614,767	3,697,458,162	11,900,258,220	948.15	1,453,255,487
1948.....	8,830,952,866	270,105,626	4,004,294,358	13,105,352,850	1,022.02	1,504,248,947
1949.....	9,808,084,850	306,032,801	4,294,644,199	14,408,761,850	1,071.52	1,636,356,612
1950.....	10,756,249,942	342,878,530	4,646,707,595	15,745,836,067	1,148.33	1,798,864,211
1951.....	11,807,992,826	391,382,883	5,036,207,593	17,235,583,302	1,230.32	1,990,926,006
1952.....	13,085,349,418	443,275,711	5,562,003,368	19,090,628,497	1,322.98	2,287,264,465
1953.....	14,526,740,295	519,137,847	6,181,027,477	21,226,905,619	1,436.09	2,551,393,073
1954.....	15,765,916,390	596,756,619	6,771,905,859	23,134,578,868	1,513.35	2,656,722,341
1955.....	17,401,229,498	691,660,141	7,358,681,886	25,451,571,525	1,621.33	3,154,670,883
1956.....	19,783,194,985	819,968,279	8,484,252,879	29,087,416,143	1,808.81	4,119,767,664

¹ Based on official estimates of population given at p. 119.

3.—Life Insurance Transacted in Canada by Companies under Federal Registration 1954-56

Year and Nationality of Company	Policies Effectuated		Policies in Force Dec. 31		Insurance Premiums	Claims ¹
	No.	Amount	No.	Amount		
		\$		\$	\$	\$
1954						
Canadian.....	347,050	1,823,008,957	4,469,146	15,765,916,390	325,154,008	104,470,590
British.....	19,378	104,306,211	182,015	596,756,619	14,145,587	3,893,600
Foreign.....	352,531	729,407,173	5,130,609	6,771,905,859	147,110,217	46,117,566
Totals, 1954.....	718,959	2,656,722,341	9,781,770	23,134,578,868	486,409,812	154,481,756
1955						
Canadian.....	351,659	2,149,050,981	4,592,921	17,401,229,498	347,407,718	107,953,211
British.....	20,590	124,429,637	191,687	691,660,141	16,528,219	3,717,408
Foreign.....	356,508	881,190,245	5,143,250	7,358,681,886	156,162,253	50,212,586
Totals, 1955.....	728,757	3,154,670,863	9,927,858	25,451,571,525	520,095,190	161,883,205
1956						
Canadian.....	374,767	2,697,441,456	4,733,923	19,783,194,985	377,531,692	120,978,895
British.....	24,428	159,182,181	205,218	819,968,279	19,759,474	5,066,155
Foreign.....	352,594	1,263,144,027	5,160,454	8,484,252,879	167,432,268	54,806,973
Totals, 1956.....	751,789	4,119,767,664	10,099,595	29,087,416,143	564,723,434	180,852,023

¹ Death, disability and maturity of insurance and annuity contracts.

4.—Summary of Life Insurance Business in Canada by Companies under Federal Registration 1954-56

Item	1954	1955	1956
Canadian Companies—			
New policies effected during year.....No.	347,050	351,659	374,767
\$	1,823,008,957	2,149,050,981	2,697,441,456
Policies in force Dec. 31.....No.	4,469,146	4,592,921	4,733,923
\$	15,765,916,390	17,401,229,498	19,783,194,985
Policies ceased by death or maturity.....No.	36,519	37,287	40,829
\$	98,514,809	102,381,507	114,713,331
Insurance premiums.....\$	325,154,008	347,407,718	377,531,692
Claims incurred ¹\$	104,470,590	107,953,211	120,978,895
British Companies—			
New policies effected during year.....No.	19,378	20,590	24,428
\$	104,306,211	124,429,637	159,182,181
Policies in force Dec. 31.....No.	182,015	191,687	205,218
\$	596,756,619	691,660,141	819,968,279
Policies ceased by death or maturity.....No.	2,632	2,176	2,203
\$	3,486,350	3,275,821	4,572,232
Insurance premiums.....\$	14,145,587	16,528,219	19,759,474
Claims incurred ¹\$	3,893,600	3,717,408	5,066,155
Foreign Companies—			
New policies effected during year.....No.	352,531	356,508	352,594
\$	729,407,173	891,190,245	1,263,144,027
Policies in force Dec. 31.....No.	5,130,609	5,143,250	5,160,454
\$	6,771,905,859	7,358,681,886	8,484,252,870
Policies ceased by death or maturity.....No.	58,793	61,724	65,317
\$	42,548,409	46,730,255	50,861,990
Insurance premiums.....\$	147,110,217	156,162,253	167,432,268
Claims incurred ¹\$	46,117,566	50,212,586	54,806,973
All Companies—			
New policies effected during year.....No.	718,959	728,757	751,789
\$	2,656,722,341	3,154,670,863	4,119,767,664
Policies in force Dec. 31.....No.	9,781,770	9,927,858	10,099,595
\$	23,134,578,868	25,451,571,525	29,087,416,143
Policies ceased by death or maturity.....No.	97,944	101,187	108,349
\$	144,549,568	152,387,583	170,147,553
Insurance premiums.....\$	488,409,812	520,098,190	564,723,434
Claims incurred ¹\$	154,481,756	161,883,205	180,852,023

¹ Death, disability and maturity of insurance and annuity contracts.

5.—Ordinary and Industrial Life Insurance Policies in Force and Effected in Canada by Companies under Federal Registration 1954-56

Year, Type of Policy and Nationality of Company	New Policies Effected			Policies in Force Dec. 31		
	No.	Amount	Average Amount of a Policy	No.	Amount	Average Amount of a Policy
		\$	\$		\$	\$
1954						
Ordinary Policies—						
Canadian.....	297,096	1,484,726,597	4,997	3,799,891	11,836,027,348	3,115
British.....	19,360	102,850,190	5,311	139,467	563,718,425	4,042
Foreign.....	159,331	499,993,511	3,138	1,845,585	3,691,220,394	2,000
Industrial Policies—						
Canadian.....	48,902	53,803,881	1,100	660,940	560,932,462	849
British.....	—	—	—	42,467	6,209,013	146
Foreign.....	192,241	91,081,906	474	3,279,176	1,137,994,970	347

5.—Ordinary and Industrial Life Insurance Policies in Force and Effected in Canada by Companies under Federal Registration 1954-56—concluded

Year, Type of Policy and Nationality of Company	New Policies Effected			Policies in Force Dec. 31		
	No.	Amount	Average Amount of a Policy	No.	Amount	Average Amount of a Policy
1955		\$	\$		\$	\$
Ordinary Policies—						
Canadian.....	303,507	1,666,529,229	5,491	3,926,252	12,884,370,483	3,282
British.....	20,564	121,477,288	5,907	151,764	655,173,628	4,317
Foreign.....	239,219	662,472,508	2,769	1,975,381	4,094,475,717	2,073
Industrial Policies—						
Canadian.....	46,966	53,410,346	1,137	657,650	571,120,106	868
British.....	—	—	—	39,821	5,718,334	144
Foreign.....	115,960	53,499,320	461	3,161,004	1,117,247,581	353
1956						
Ordinary Policies—						
Canadian.....	329,413	2,010,864,403	6,104	4,070,464	14,295,274,819	3,512
British.....	24,396	154,740,111	6,343	167,491	775,957,517	4,633
Foreign.....	274,157	916,533,176	3,343	2,132,126	4,786,009,610	2,245
Industrial Policies—						
Canadian.....	43,797	50,650,450	1,156	653,418	580,676,297	889
British.....	—	—	—	37,595	5,302,185	141
Foreign.....	74,527	34,628,743	465	3,017,999	1,081,932,330	358

6.—Insurance Death Rates in Canada 1954-56

Type of Insurer	1954			1955			1956		
	Policies Exposed to Risk	Policies Ter- minated by Death	Death Rate per 1,000	Policies Exposed to Risk	Policies Ter- minated by Death	Death Rate per 1,000	Policies Exposed to Risk	Policies Ter- minated by Death	Death Rate per 1,000
	No.	No.		No.	No.		No.	No.	
All companies, ordinary.....	5,694,739	29,975	5.3	5,934,497	30,641	5.2	6,228,005	32,531	5.2
All companies, industrial.....	3,998,290	30,222	7.6	3,935,385	29,711	7.6	3,799,191	30,895	8.1
Fraternal benefit societies.....	356,231	3,826	10.7	362,670	3,878	10.7	371,406	3,994	10.8
Totals.....	10,049,260	64,023	6.4	10,232,552	64,230	6.3	10,398,602	67,420	6.5

Subsection 3.—Finances of Life Insurance Companies under Federal Registration

The financial statistics of Tables 7 and 8 cover only life insurance companies under federal registration and do not include fraternal organizations and provincial licensees. The figures for British and foreign companies apply to their assets, liabilities and operations in Canada only, but assets and liabilities, income and expenditure of Canadian companies arise in part from business abroad.

7.—Total Assets and Liabilities of Canadian Life Insurance Companies under Federal Registration and Assets and Liabilities in Canada of British and Foreign Life Insurance Companies 1954-56.

NOTE.—Owing to a change in actuarial practice, these figures are not strictly comparable with those for earlier years published in previous issues of the Year Book.

Assets and Liabilities	1954	1955	1956
	\$	\$	\$
Canadian Companies¹			
Assets²	5,872,374,293	6,278,437,331	6,669,605,421
Bonds.....	3,371,666,730	3,399,289,159	3,382,818,042
Stocks.....	331,818,541	331,109,151	355,444,914
Mortgage loans on real estate.....	1,575,364,303	1,907,768,012	2,228,944,199
Agreements of sale of real estate.....	4,636,000	6,273,664	5,674,130
Real estate.....	135,805,198	157,322,383	185,787,700
Collateral loans.....	38,007	41,651	54,711
Policy loans.....	286,752,514	299,009,095	320,413,469
Cash.....	52,417,517	60,308,475	64,047,524
Investment income, due and accrued.....	52,592,860	56,102,418	59,609,374
Outstanding insurance premiums and annuity considerations..	52,918,176	53,263,727	56,435,022
Other assets.....	8,364,447	7,999,596	10,376,346
Liabilities	5,565,330,860	5,924,339,215	6,285,301,743
Actuarial reserve for contracts in force.....	4,681,968,128	4,980,295,198	5,277,270,480
Outstanding claims under contracts.....	47,259,594	50,000,896	54,504,703
Sundry liabilities.....	836,103,138	894,043,121	953,526,560
Surplus.....	294,317,623	340,670,776	370,620,688
Capital stock paid up.....	12,725,810	13,427,340	13,682,990
British Companies			
Assets³	235,473,069	263,895,518	284,339,559
Bonds.....	152,973,015	159,830,131	161,069,833
Stocks.....	34,910,432	44,689,551	49,650,673
Mortgage loans on real estate.....	33,780,769	45,580,976	59,066,079
Real estate.....	2,972,220	3,769,415	3,823,933
Policy loans.....	4,397,106	4,805,767	5,569,502
Cash.....	4,427,669	3,133,203	2,776,569
Investment income, due and accrued.....	816,737	816,465	939,666
Outstanding insurance premiums and annuity considerations..	1,090,467	1,143,406	1,295,972
Other assets.....	104,654	126,504	147,332
Liabilities	194,749,936	224,542,319	258,508,138
Actuarial reserve for contracts in force.....	191,060,034	220,565,756	252,810,542
Outstanding claims under contracts.....	1,036,304	1,083,698	2,203,921
Sundry liabilities.....	2,653,598	2,892,865	3,493,675
Excess of assets over liabilities in Canada.....	40,723,133	39,353,199	25,831,421
Foreign Companies			
Assets³	1,218,197,749	1,260,803,893	1,248,135,204
Bonds.....	967,713,422	976,991,572	919,065,711
Stocks.....	802,500	2,040,000	1,920,000
Mortgage loans on real estate.....	164,322,057	191,872,727	232,349,015
Real estate.....	1,129,513	2,359,717	2,967,693
Policy loans.....	56,982,533	58,564,638	61,803,000
Cash.....	9,429,727	11,922,796	10,752,445
Investment income, due and accrued.....	12,395,780	12,008,391	13,430,502
Outstanding insurance premiums and annuity considerations..	5,388,138	4,928,429	5,714,077
Other assets.....	34,079	115,623	132,761
Liabilities	1,082,959,747	1,142,302,030	1,203,509,722
Actuarial reserve for contracts in force.....	1,001,310,698	1,053,975,949	1,109,151,162
Outstanding claims under contracts.....	7,786,692	8,371,379	9,568,572
Sundry liabilities.....	73,862,357	79,954,702	84,789,988
Excess of assets over liabilities in Canada.....	135,238,002	118,501,863	44,625,482

¹ A detailed classification of assets of Canadian companies will be found in the *Report of the Superintendent of Insurance, Vol. I.* ² At book values. The liabilities include a reserve equal to the amount, if any, by which the total book value of bonds, stocks and real estate exceeds the total market value (or amortized value where applicable). ³ At market values.

8.—Total Revenue and Expenditure of Canadian Life Insurance Companies under Federal Registration and Revenue and Expenditure in Canada of British and Foreign Life Insurance Companies 1954-56.

NOTE.—Owing to a change in actuarial practice, these figures are not strictly comparable with those for earlier years published in previous editions of the Year Book.

Principal Items	1954	1955	1956
	\$	\$	\$
Canadian Companies			
Revenue	920,446,519	995,544,068	1,056,775,813
Insurance premiums and annuity considerations.....	668,573,802	719,881,207	758,619,224
Investment income.....	224,148,030	246,248,673	270,454,649
Sundry items.....	27,724,687	29,414,188	27,701,940
Expenditure	875,547,083	945,260,087	1,002,652,421
Claims incurred.....	306,200,035	323,181,859	349,072,338
Normal increase in actuarial reserve.....	292,477,293	321,052,491	328,052,231
Taxes, licences and fees.....	16,332,731	18,984,460	20,260,986
Commissions and general expenses.....	138,145,005	150,465,249	164,929,268
Sundry items.....	46,301,207	48,635,875	50,745,716
Dividends to policyholders.....	63,418,115	70,525,717	81,178,919
Increase in provision for profits to policyholders.....	12,672,697	12,414,436	8,412,963
Analysis of Increase in Surplus—			
Excess of revenue over expenditure.....	44,899,436	50,283,981	54,123,392
Net capital gain on investments.....	1,732,060	9,978,060	5,708,517
Other credits to surplus (net).....	2,798,277	6,283,794	—1,811,073
Net increase in special reserves.....	—2,868,585	—1,675,318	—13,755,598
Special increase in actuarial reserve.....	—15,792,592	—15,333,472	—10,904,848
Dividends to shareholders.....	—2,525,088	—3,183,891	—3,403,835
Increase in surplus (policyholders and shareholders).....	28,243,508	46,353,154	29,956,555
British Companies			
Revenue	44,113,635	50,399,004	58,304,361
Insurance premiums and annuity considerations.....	35,556,317	40,447,928	46,651,341
Investment income.....	8,023,213	9,239,343	11,043,121
Sundry items.....	534,105	711,733	609,899
Expenditure	18,160,555	20,757,514	27,410,445
Claims incurred.....	9,548,482	10,631,587	14,396,371
Taxes, licences and fees.....	343,826	391,801	439,636
Commissions and general expenses.....	6,151,692	6,874,757	8,330,419
Other expenditure.....	691,431	467,397	766,102
Dividends to policyholders.....	1,425,124	2,391,972	3,477,917
Excess of revenue over expenditure.....	25,953,080	29,641,490	30,893,916
Foreign Companies			
Revenue	207,116,134	218,858,547	235,823,116
Insurance premiums and annuity considerations.....	154,999,433	164,267,699	176,614,651
Investment income.....	44,429,578	45,868,654	49,989,480
Sundry items.....	7,687,123	8,722,194	9,219,015
Expenditure	136,603,748	147,913,683	164,341,693
Claims incurred.....	70,064,235	75,856,746	81,958,540
Taxes, licences and fees.....	3,106,920	3,552,501	4,175,255
Commissions and general expenses.....	36,080,199	38,623,304	45,013,227
Other expenditure.....	7,487,273	7,661,931	8,615,035
Dividends to policyholders.....	19,865,121	22,219,201	24,579,636
Excess of revenue over expenditure.....	70,512,386	70,944,864	71,481,453

Subsection 4.—Life Insurance Effected through Fraternal Benefit Societies

In addition to life insurance, some fraternal benefit societies grant other insurance benefits to members, notably sickness benefits, but these are relatively unimportant. Table 9 gives statistics of life insurance effected through fraternal benefit societies by

Canadian members, together with statistics of assets, liabilities, income and expenditure relating to all business of Canadian societies and to the business in Canada of foreign societies. The rates charged by these societies are computed to be sufficient to provide the benefits granted, having regard for actuarial principles. The benefit funds of each society must be valued annually by a qualified actuary (Fellow, by examination, of the Institute of Actuaries of Great Britain, of the Faculty of Actuaries in Scotland, or of the Society of Actuaries) and a readjustment of rates or benefits must be made, unless the actuary certifies to the solvency of each fund. The statistics of the first section of Table 9 relate to the 16 Canadian societies reporting to the Department of Insurance of the Federal Government, of which only one does not grant life insurance benefits.

Under an amendment to the Insurance Act, effective Jan. 1, 1920, all foreign fraternal benefit societies were required to obtain authority from the Federal Government prior to transacting business in Canada. However, any such societies which at that date were transacting business under provincial licences, though forbidden to accept new members, were permitted to continue all necessary transactions in respect of insurance already in force. Most of these societies and some foreign societies that had not previously been licensed by the provinces have since obtained federal authority to transact business. Of both classes of societies, 32 transacted business in Canada during 1956; two of the societies do not grant life insurance benefits.

**9.—Life Insurance in Canada of Fraternal Benefit Societies reporting to the
Federal Department of Insurance 1954-56**

Item	1954	1955	1956
Canadian Societies			
Summary—			
Premium income.....	\$ 2,935,749	2,959,276	3,420,452
Benefits paid.....	\$ 3,229,450	3,372,010	3,421,129
New certificates effected.....	No. 24,437	22,073	29,157
Certificates in force Dec. 31.....	\$ 33,152,586	40,176,418	46,481,330
	No. 214,069	213,264	224,187
Certificates ceased as claims.....	\$ 203,898,002	215,050,782	238,087,472
	No. 3,005	2,987	3,056
	\$ 2,544,168	2,431,194	2,544,066
	\$	\$	\$
Assets¹.....	107,077,460	112,008,594	118,214,286
Real estate.....	5,008,479	4,886,953	4,657,906
Real estate held under agreements of sale.....	731,529	707,933	752,791
Loans on real estate.....	10,539,654	11,023,159	13,188,424
Policy loans and liens.....	4,016,226	4,107,531	4,202,091
Bonds, debentures and stocks.....	83,085,531	86,610,561	91,752,653
Cash.....	1,758,584	2,698,276	1,461,695
Interest and rents due or accrued.....	732,106	751,279	819,744
Outstanding and deferred premiums and contributions.....	890,058	1,122,173	1,263,350
Other.....	315,293	100,729	115,632
Liabilities¹.....	95,500,017	99,849,317	106,461,553
Reserve under contracts in force.....	85,075,664	87,744,278	92,075,848
Outstanding claims.....	440,302	456,348	468,822
Other.....	9,984,051	11,648,691	13,916,883
Income¹.....	17,041,639	19,499,093	20,763,777
Premiums.....	6,101,848	6,049,680	7,735,412
Received for expense purposes.....	5,629,688	7,071,185	7,240,359
Interest and rents.....	3,958,353	4,171,103	4,351,710
Other.....	1,351,750	2,207,125	1,436,296

¹ Includes business outside Canada.

**9.—Life Insurance in Canada of Fraternal Benefit Societies reporting to the
Federal Department of Insurance 1954-56—concluded**

Item	1954	1955	1956
	\$	\$	\$
Canadian Societies—concluded			
Expenditure¹	12,555,745	14,091,687	14,439,860
Benefits paid under certificates.....	6,618,684	6,808,940	6,801,783
Expenses.....	5,764,933	7,049,061	7,402,530
Other disbursements.....	172,128	233,686	235,547
Excess of income over expenditure.....	4,485,894	5,407,406	6,323,917
Foreign Societies			
Summary—			
Premium income..... \$	3,432,513	3,666,533	3,735,058
Benefits paid..... \$	2,538,993	2,435,430	2,631,055
New certificates effected..... No.	8,734	8,829	9,517
Certificates in force Dec. 31..... \$	15,583,002	18,349,594	21,153,609
Certificates ceased as claims..... No.	119,360	122,197	124,758
Certificates ceased as claims..... \$	143,644,104	150,844,516	161,188,548
Certificates ceased as claims..... No.	1,416	1,419	1,447
Certificates ceased as claims..... \$	1,596,093	1,447,618	1,534,103
	\$	\$	\$
Assets	40,276,083	41,138,912	40,746,405
Real estate.....	952,595	952,595	952,595
Loans on real estate.....	317,475	432,332	1,176,584
Policy loans and liens.....	2,139,629	2,356,563	2,574,379
Bonds, debentures and stocks.....	34,842,897	35,304,760	34,080,021
Cash.....	1,379,880	1,429,006	1,250,264
Interest and rents due or accrued.....	320,327	343,158	368,875
Outstanding and deferred premiums and contributions.....	323,280	320,498	339,862
Other.....	—	—	3,825
Liabilities	33,752,100	35,633,433	37,586,413
Reserve under contracts in force.....	30,693,815	32,298,849	34,014,242
Outstanding claims.....	518,519	580,839	572,687
Other.....	2,539,766	2,753,745	2,999,484
Income	8,132,960	8,419,127	8,837,182
Premiums.....	4,956,239	5,240,503	5,390,553
Received for expense purposes.....	1,313,950	1,314,206	1,456,058
Interest and rents.....	1,250,117	1,270,595	1,367,495
Other.....	612,654	593,823	623,076
Expenditure	4,793,746	4,852,120	5,272,598
Benefits paid under certificates.....	3,436,299	3,391,021	3,720,121
Expenses.....	888,356	983,277	1,023,908
Other disbursements.....	469,091	477,822	528,569
Excess of income over expenditure.....	3,339,214	3,567,007	3,564,584

¹ Includes business outside Canada.

**Subsection 5.—Life Insurance in Force Outside Canada by Registered
Canadian Companies**

Tables 10 and 11 give summary statistics of insurance in force as at Dec. 31, 1954 and 1955, in currencies other than Canadian, classified by companies and by the currencies in which business was written. The data given here are in Canadian dollars, mainly at

par rates of exchange, for the countries concerned, but there are several exceptions where, for purposes of account, certain companies have converted foreign currencies at rates other than par, particularly where the current rate differs substantially from the par rate. Approximately 70 p.c. of all such business in force was written in United States currency and 16 p.c. in sterling. From another standpoint approximately 25 p.c. was written in currencies of Commonwealth countries outside Canada and 75 p.c. in currencies of foreign countries.

Canadian life insurance companies operating under Federal Government registration at Dec. 31, 1955, had life insurance in force amounting to \$7,892,914,084 in countries outside Canada. Insurance in force in currencies other than Canadian amounted to \$7,845,488,568 and the difference between these figures is presumably the net amount of non-Canadian business transacted in Canadian currency. As against the total non-Canadian business, including annuity business, the Commonwealth and foreign investments of Canadian life insurance companies as at Dec. 31, 1955 amounted to \$2,226,851,749. As the business in force in Canada of these companies at Dec. 31, 1955 amounted to \$17,401,229,498, the total business on their books, Canadian and non-Canadian, amounted to \$25,294,143,582. Thus over 31 p.c. of the total business in force was outside Canada.

10.—Life Insurance Effectuated and in Force of Canadian Companies (excluding Fraternal Societies) operating under Federal Registration, in Currencies other than Canadian, by Company 1954 and 1955.

Year and Company	Insurance Effectuated			Insurance in Force Dec. 31		
	Common-wealth Currencies	Foreign Currencies	Total	Common-wealth Currencies	Foreign Currencies	Total
1954	\$	\$	\$	\$	\$	\$
Alliance Nationale.....	—	—	—	—	3,492,225	3,492,225
Canada.....	21,819,084	66,023,798	87,842,882	169,864,935	395,220,365	565,085,300
Commercial.....	—	—	—	—	35,000	35,000
Confederation.....	17,503,323	52,177,496	69,680,819	157,593,040	248,542,797	406,135,837
Continental.....	—	—	—	22,767	106,318	129,085
Crown.....	10,003,608	81,651,052	91,654,660	79,069,387	373,657,487	452,726,874
Dominion.....	1,390,626	17,247,490	18,638,116	11,653,896	112,278,972	123,932,871
Dom. of Canada General	350,755	—	350,755	3,244,253	3,000	3,247,253
T. Eaton.....	—	—	—	12,500	3,333	15,833
Equitable.....	—	—	—	—	128,379	128,379
Great-West.....	—	210,226,202	210,226,202	79,154	872,007,447	872,086,601
Imperial.....	15,854,081	2,595,498	18,449,579	91,252,854	41,441,708	132,694,562
London.....	—	393,615	393,615	—	6,156,093	6,156,093
Manufacturers.....	66,349,799	75,085,165	141,434,964	380,301,382	561,118,732	941,420,114
Maritime.....	81,985	—	81,985	2,206,400	41,111	2,247,511
Monarch.....	—	105,985	105,985	—	324,507	324,507
Montreal.....	—	—	—	204,365	328,036	532,401
Mutual.....	—	406,283	406,283	826,685	18,685,354	19,512,039
National.....	3,500,671	1,434,989	4,935,660	10,719,206	4,103,947	14,823,153
North American.....	3,885,504	22,886,959	26,772,463	16,725,935	105,142,753	121,868,688
Northern.....	—	2,361,478	2,361,478	58,850	19,029,927	19,088,777
Savegarde.....	—	—	—	—	5,000	5,000
Sun.....	131,319,819	320,055,713	451,375,532	967,008,173	2,475,346,001	3,442,354,174
Western.....	—	—	—	—	54,936	54,936
Totals, 1954.....	272,059,255	852,651,723	1,124,710,978	1,890,843,785	5,237,253,428	7,128,097,213

10.—Life Insurance Effectuated and in Force of Canadian Companies (excluding Fraternal Societies) operating under Federal Registration, in Currencies other than Canadian, by Company 1954 and 1955—concluded.

Year and Company	Insurance Effectuated			Insurance in Force Dec. 31		
	Common-wealth Currencies	Foreign Currencies	Total	Common-wealth Currencies	Foreign Currencies	Total
1955	\$	\$	\$	\$	\$	\$
Alliance Nationale.....	—	—	—	—	3,424,845	3,424,845
Canada.....	27,722,218	74,620,408	102,342,626	188,114,258	455,473,137	643,587,395
Commercial.....	—	—	—	—	35,000	35,000
Confederation.....	20,927,621	62,924,932	83,852,553	170,153,654	286,192,488	456,346,142
Continental.....	—	—	—	—	104,414	127,051
Crown.....	9,325,997	95,342,211	104,668,208	81,483,378	446,449,666	527,933,044
Dominion.....	1,691,593	18,077,925	19,769,518	13,125,397	124,006,515	137,131,912
Dom. of Canada General	499,430	—	499,430	3,516,396	3,000	3,519,396
T. Eaton.....	—	—	—	12,500	3,333	15,833
Equitable.....	—	—	—	—	93,567	93,567
Great-West.....	—	158,784,651	158,784,651	107,070	1,004,024,365	1,004,131,435
Imperial.....	16,057,702	2,856,778	18,914,480	90,988,983	42,064,379	133,053,362
London.....	—	1,371,572	1,371,572	—	7,055,871	7,055,871
Manufacturers.....	68,943,295	112,761,401	181,704,696	433,363,045	642,380,994	1,075,744,039
Maritime.....	79,644	15,000	94,644	1,409,742	55,962	1,465,704
Monarch.....	—	36,103	36,103	—	348,935	348,935
Montreal.....	—	—	—	186,264	296,565	482,829
Mutual.....	—	2,229,378	2,229,378	721,531	19,817,721	20,539,252
National.....	3,617,463	1,920,173	5,537,636	13,299,443	5,606,932	18,906,375
North American.....	4,031,193	28,248,533	32,279,726	20,180,156	131,636,153	151,816,309
Northern.....	—	3,087,376	3,087,376	45,717	21,231,587	21,277,304
Sauvegarde.....	—	—	—	—	5,000	5,000
Sun.....	145,573,084	296,378,927	441,952,011	954,484,015	2,683,913,017	3,638,397,032
Western.....	—	—	—	—	50,936	50,936
Totals, 1955.....	298,469,240	858,655,368	1,157,124,608	1,971,214,186	5,874,274,382	7,845,488,568

11.—Life Insurance Effectuated and in Force of Canadian Companies (excluding Fraternal Societies) operating under Federal Registration, in Currencies other than Canadian, by Currency 1954 and 1955.

Currency	1954		1955	
	Insurance Effectuated	Insurance in Force	Insurance Effectuated	Insurance in Force
	\$	\$	\$	\$
Commonwealth Currencies.....	272,059,255	1,890,843,785	298,469,240	1,971,214,186
Pounds—				
Sterling.....	168,437,900	1,249,234,830	183,663,795	1,290,641,849
Australia.....	—	31,368	—	31,368
British West Indies and Bermuda.....	9,016,610	63,671,503	10,528,023	72,351,055
Northern Rhodesia.....	644,490	1,021,389	534,380	1,485,877
South Africa.....	46,265,257	251,694,044	53,092,945	277,371,173
Southern Rhodesia.....	5,184,706	15,686,465	6,397,371	20,516,983
Dollars—				
British Honduras.....	32,870	736,424	43,775	726,599
British West Indies, Bermuda and British Guiana.....	15,271,909	95,353,426	18,318,584	102,541,592
Hong Kong.....	1,050,902	10,437,822	1,169,123	10,691,108
Malayan Straits.....	6,070,069	28,273,809	5,104,694	27,033,855
Rupees—				
Ceylon.....	4,888,048	36,073,096	4,747,016	35,586,126
India.....	10,248,360	118,276,496	10,964,094	108,881,654
Pakistan.....	—	1,459,790	—	1,059,083

11.—Life Insurance Effectuated and in Force of Canadian Companies (excluding Fraternal Societies) operating under Federal Registration, in Currencies other than Canadian, by Currency 1954 and 1955—concluded.

Currency	1954		1955	
	Insurance Effectuated	Insurance in Force	Insurance Effectuated	Insurance in Force
	\$	\$	\$	\$
Shillings— East Africa	4,948,134	18,893,323	3,905,440	22,295,864
Foreign Currencies	852,651,723	5,237,253,428	858,655,368	5,874,274,382
Bahits (Thailand)	—	164,446	—	150,977
Bolivars (Venezuela)	2,922,892	35,272,671	2,283,193	33,193,201
Cordobas (Nicaragua)	—	7,907	—	7,907
Dollars (United States of America)	809,620,799	4,870,277,695	816,631,795	5,505,143,354
Francs (France)	—	13,946	—	11,470
Francs (Switzerland)	—	7,280	—	7,280
Guilders (Netherlands)	—	622,805	—	554,373
Guilders (Netherlands Antilles)	1,191,635	12,340,377	1,591,162	12,378,445
Kyats (Burma)	—	675,653	—	472,775
Pesos (Argentina)	583,438	15,681,666	804,157	11,171,523
Pesos (Chile)	—	137,989	—	358
Pesos (Colombia)	6,090,208	22,656,944	5,963,418	25,068,014
Pesos (Cuba)	19,194,409	169,157,985	16,090,779	170,770,522
Pesos (Dominican Republic)	1,134,574	1,407,481	2,624,305	4,246,898
Pesos (Mexico)	1,488,768	9,840,570	1,400,854	10,179,534
Pesos (Philippines)	8,962,915	57,901,086	8,375,801	60,066,402
Pounds (Egypt)	—	28,760,395	—	25,973,544
Pounds (Israel)	1,462,085	7,148,396	2,889,904	9,858,314
Rupiahs (Indonesia)	—	4,964,415	—	4,821,021
Soles (Peru)	—	204,566	—	189,351
Yen (Japan)	—	9,155	—	9,119
Grand Totals	1,124,710,978	7,138,097,213	1,157,124,608	7,845,458,568

Subsection 6.—Total Registered Life Insurance in Canada and Business of Canadian Organizations Abroad

Table 12 summarizes the business outside Canada of Canadian life companies and fraternal benefit societies. If to these figures is added the business in Canada of these organizations, as shown in Table 1, p. 1166, total business, domestic and external, of all Canadian life insurance companies and fraternal societies may be obtained. Again adding the business in Canada of British and foreign companies and fraternal societies, a grand total is obtained of all life insurance in Canada and of the life insurance business abroad of Canadian organizations; this total is shown in Table 13.

12.—Business of Registered Canadian Life Companies and Fraternal Societies Abroad 1954-56

NOTE.—Figures for business in Canada will be found in Table 1, p. 1166.

Item	Premiums Received	Claims Paid ¹	New Policies Effectuated	Insurance in Force Dec. 31
	\$	\$	\$	\$
1954				
Canadian Life Companies—				
Federal	225,631,138	84,382,122	1,126,942,476	7,178,548,235
Provincial	₂	₂	₂	₂
Canadian Fraternal Societies—				
Federal	1,728,270	2,109,319	31,631,393	145,020,975
Provincial	₂	₂	₂	₂
Totals, 1954	227,359,408	86,491,441	1,158,573,869	7,323,569,210

¹ Death, disability and maturity under insurance and annuity contracts.

² None reported.

**12.—Business of Registered Canadian Life Companies and Fraternal Societies
Abroad 1954-56—concluded**

Item	Premiums Received	Claims Paid ¹	New Policies Effectuated	Insurance in Force Dec. 31
	\$	\$	\$	\$
1955				
Canadian Life Companies—				
Federal.....	238,518,828	89,068,814	1,157,761,485	7,892,914,084
Provincial.....	2	2	2	2
Canadian Fraternal Societies—				
Federal.....	1,516,471	2,009,755	47,740,768	176,256,653
Provincial.....	2	2	2	2
Totals, 1955.....	240,035,299	91,138,569	1,205,502,253	8,069,170,737
1956				
Canadian Life Companies—				
Federal.....	245,960,782	88,643,546	1,268,633,072	8,723,055,155
Provincial.....	2	2	2	2
Canadian Fraternal Societies—				
Federal.....	2,597,436	1,990,584	64,585,354	212,831,013
Provincial.....	2	2	2	2
Totals, 1956.....	248,558,218	90,634,130	1,333,218,426	8,935,886,168

¹ Death, disability and maturity under insurance and annuity contracts.² None reported.

**13.—Total Registered Life Insurance Business in Canada and of Canadian
Organizations Abroad 1954-56**

Item	Premiums Received	Claims Paid ¹	New Policies Effectuated	Insurance in Force Dec. 31
	\$	\$	\$	\$
1954				
Canadian Life Companies—				
Federal.....	550,785,146	188,852,712	2,949,951,433	22,944,464,625
Provincial.....	19,346,808	4,836,033	216,767,245	905,666,342
Canadian Fraternal Societies—				
Federal.....	4,664,019	4,536,723	64,783,979	348,918,977
Provincial.....	8,496,048	4,096,304	64,152,034	384,517,148
British life companies.....	14,145,587	3,893,600	104,306,211	596,756,619
Foreign life companies.....	147,110,217	46,117,566	729,407,173	6,771,905,859
Foreign fraternal societies.....	3,432,513	1,732,055	15,583,002	143,644,104
Grand Totals, 1954.....	747,980,338	254,064,993	4,144,951,077	32,095,873,674
1955				
Canadian Life Companies—				
Federal.....	585,926,546	197,022,025	3,306,812,466	25,294,143,582
Provincial.....	21,990,251	4,966,392	298,889,862	1,172,676,819
Canadian Fraternal Societies—				
Federal.....	4,475,747	4,503,792	87,917,186	391,307,435
Provincial.....	7,192,322	3,554,282	52,711,114	324,910,970
British life companies.....	16,528,219	3,717,408	124,429,637	691,660,141
Foreign life companies.....	156,162,253	50,212,586	881,190,245	7,358,681,886
Foreign fraternal societies.....	3,666,533	1,545,636	18,349,594	150,844,516
Grand Totals, 1955.....	795,941,871	265,532,121	4,770,300,104	35,384,225,349

¹ Death, disability and maturity under insurance and annuity contracts.

13.—Total Registered Life Insurance Business in Canada and of Canadian Organizations Abroad 1951-56—concluded

Item	Premiums Received	Claims Paid ¹	New Policies Effected	Insurance in Force Dec. 31
	\$	\$	\$	\$
1956				
Canadian Life Companies—				
Federal.....	623,492,474	209,622,441	3,966,074,528	28,506,250,140
Provincial.....	25,721,603	6,646,729	295,303,847	1,431,208,139
Canadian Fraternal Societies—				
Federal.....	6,017,888	4,444,051	111,066,684	450,918,485
Provincial.....	7,361,057	3,722,753	56,217,329	348,465,083
British life companies.....	19,759,474	5,066,155	159,182,181	819,968,279
Foreign life companies.....	167,432,268	54,806,973	1,263,144,027	8,484,252,879
Foreign fraternal societies.....	3,735,058	1,620,888	21,153,609	161,188,548
Grand Totals, 1956.....	853,519,822	285,929,990	5,872,112,205	40,202,251,553

¹ Death, disability and maturity under insurance and annuity contracts.

Section 2.—Fire and Casualty Insurance

Most companies carrying on fire insurance in Canada also transact casualty insurance. At the end of 1956 there were 309 companies registered by the Federal Government to transact fire insurance (79 Canadian, 89 British and 141 foreign). Of that number, 295 companies (73 Canadian, 88 British and 134 foreign) were also registered to transact casualty insurance. At the same date, there were 88 companies registered to transact casualty insurance but not fire insurance (17 Canadian, 6 British and 65 foreign). In addition to the number registered to transact casualty insurance, there were 23 fraternal benefit societies carrying on accident and sickness insurance. Also a certain amount of business is done by companies under provincial registration. These companies generally confine their operations to the province of incorporation but may be allowed to sell insurance in other provinces.

Table 14 shows the division of all business in this field and indicates that the bulk of it (about 85 p.c. of the net premiums written) is transacted by companies having Federal Government registration. The fire insurance business and the casualty insurance business of federally registered companies are treated separately in Subsections 1 and 3 following, but finances for these classes cannot be segregated and are therefore covered together in Subsection 4. Fire losses are shown in Subsection 2.

14.—Fire and Casualty Insurance Transacted in Canada 1955-56

Item	1955		1956	
	Net Premiums Written	Net Claims Incurred	Net Premiums Written	Net Claims Incurred
	\$	\$	\$	\$
Fire Insurance				
Dominion registered companies.....	146,444,845	77,836,245	155,506,787	86,088,850
Provincial Licensees.....	15,071,988	9,299,116	16,068,792	9,790,651
In province by which incorporated.....	14,327,644	8,928,877	15,212,026	9,182,170
Outside province by which incorporated.....	744,344	370,239	856,766	608,481
Lloyds, London.....	6,408,710	7,727,080	7,929,385	7,224,404
Totals, Fire.....	167,925,543	94,862,441	179,504,964	103,103,905

14.—Fire and Casualty Insurance Transacted in Canada 1955-56—concluded

Item	1955		1956	
	Net Premiums Written	Net Claims Incurred	Net Premiums Written	Net Claims Incurred
	\$	\$	\$	\$
Casualty Insurance				
Dominion registered companies.....	371,279,373	214,344,911	415,457,714	267,131,048
Provincial Licensees.....	24,355,972	13,677,497	24,423,092	14,412,804
In province by which incorporated.....	22,165,202	12,506,638	22,037,214	12,614,206
Outside province by which incorporated.....	2,190,770	1,170,859	2,385,878	1,798,598
Lloyds, London.....	18,151,236	11,698,184	19,311,022	14,725,521
Fraternal benefit societies.....	28,158,121	25,112,093	31,155,462	28,211,295
Totals, Casualty.....	441,944,702	264,832,685	490,347,290	324,480,668
Totals, Fire and Casualty.....	609,870,245	359,695,126	669,852,254	427,584,573

Subsection 1.—Fire Insurance Business Transacted by Companies under Federal Registration

The amount of fire insurance written has increased very rapidly in recent years, having more than doubled since the end of the War. The percentage of claims incurred to premiums written has remained fairly constant during the period, as shown in Table 15.

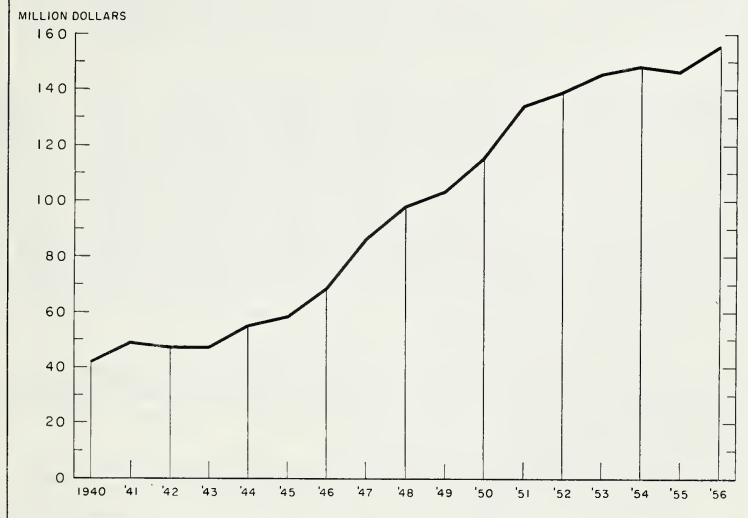
15.—Fire Insurance by Companies Operating under Federal Registration, Decennially 1880-1940 and Annually 1941-56

NOTE.—Figures for 1869-1900 are given in the 1939 Year Book, p. 973, and for 1901-39 in the 1942 edition, pp. 847-848.

Year	Net Premiums Written during Year	Net Claims Incurred during Year	Year	Net Premiums Written during Year	Net Claims Incurred during Year
	\$	\$		\$	\$
1880.....	3,479,577 ¹	1,666,578 ²	1945.....	58,335,728	30,585,357
1890.....	5,836,071 ¹	3,266,567 ²	1946.....	68,825,470	35,379,627
1900.....	8,331,948 ¹	7,774,293 ²	1947.....	86,774,952	39,513,014
1910.....	18,725,531 ¹	10,292,393 ²	1948.....	98,191,514	45,143,565
1920.....	50,527,937 ¹	21,935,387 ²	1949.....	103,955,183	46,567,188
1930.....	52,646,520	30,427,968	1950.....	115,648,449	58,524,685
1940.....	41,922,312	15,444,927	1951.....	134,496,218	52,086,541
			1952.....	139,777,732	61,124,918
1941.....	49,305,539	17,814,322	1953.....	145,937,546	66,787,604
1942.....	47,272,440	20,360,534	1954.....	148,446,105	70,445,544
1943.....	47,153,094	22,181,244	1955.....	146,444,845	77,836,245
1944.....	55,027,051	28,921,930	1956.....	155,506,787	86,088,850

¹ Net premiums received.² Net claims paid.

FIRE INSURANCE WRITTEN, EXCLUDING RENEWALS, BY COMPANIES
UNDER FEDERAL REGISTRATION, 1940-56



The relationship of claims incurred to premiums written is shown by province in Table 16.

16.—Fire Insurance in Canada by Canadian, British and Foreign Companies Operating under Federal Registration, by Province 1955 and 1956

(Registered reinsurance deducted)

Year and Province	Canadian Companies		British Companies		Foreign Companies	
	Premiums	Claims	Premiums	Claims	Premiums	Claims
	\$	\$	\$	\$	\$	\$
1955						
Newfoundland.....	402,820	166,456	1,134,193	381,265	469,359	126,175
Prince Edward Island.....	180,511	140,756	350,629	252,372	152,764	106,876
Nova Scotia.....	1,709,009	767,201	2,419,166	1,158,157	1,357,703	954,596
New Brunswick.....	1,310,679	599,114	2,268,790	1,087,864	1,394,415	562,089
Quebec.....	13,876,746	8,054,321	15,549,929	10,333,844	17,395,422	10,469,317
Ontario.....	18,773,036	8,790,027	18,363,415	9,473,570	19,114,557	9,588,972
Manitoba.....	3,326,799	1,767,468	2,202,276	1,224,741	2,208,855	1,022,586
Saskatchewan.....	3,258,146	1,187,101	1,290,029	1,550,123	1,713,614	1,392,101
Alberta.....	3,811,335	1,535,336	3,645,483	2,235,031	3,516,853	2,199,275
British Columbia.....	3,747,724	1,707,364	4,912,667	1,747,936	5,692,114	2,182,744
All other Canada ¹	202,247	45,356	363,693	285,460	48,995	49,744
Canada, 1955.....	50,599,052	24,760,500	52,500,270	29,730,363	53,061,651	28,654,475

For footnote, see end of table, p. 1182.

16.—Fire Insurance in Canada by Canadian, British and Foreign Companies Operating under Federal Registration, by Province 1955 and 1956—concluded

Year and Province	Canadian Companies		British Companies		Foreign Companies	
	Premiums	Claims	Premiums	Claims	Premiums	Claims
	\$	\$	\$	\$	\$	\$
1956						
Newfoundland.....	511,140	288,232	1,217,388	614,355	480,866	174,118
Prince Edward Island.....	206,810	55,832	349,155	67,170	144,915	49,836
Nova Scotia.....	1,886,253	905,040	2,775,651	1,507,661	1,546,863	964,068
New Brunswick.....	1,348,426	588,231	2,280,291	1,062,893	1,377,928	779,265
Quebec.....	16,333,900	9,057,634	18,103,429	10,388,995	18,485,791	13,147,775
Ontario.....	20,580,426	10,573,116	20,217,277	10,620,338	21,376,691	11,069,390
Manitoba.....	3,452,239	1,840,281	2,225,417	1,589,389	2,238,852	1,517,346
Saskatchewan.....	3,320,666	1,203,473	1,351,711	636,252	1,792,369	915,554
Alberta.....	3,736,746	1,487,267	3,465,180	1,160,760	3,209,473	1,431,596
British Columbia.....	3,917,334	2,371,233	4,659,032	2,976,641	5,636,722	3,452,219
All other Canada ¹	98,227	—257,926	438,532	451,395	200,137	63,433
Canada, 1956.....	55,392,167	23,112,413	57,983,963	31,075,849	56,490,607	33,564,600

¹ Includes the Yukon and Northwest Territories, also certain 'floater' business that cannot be apportioned to any one province.

Classification of Fire Risks.—The Department of Insurance compiles, from information supplied by the fire insurance companies registered to transact business in Canada, tables of experience as to premiums and claims by 21 classes of risk. The experience of 1954 and 1955 is given in Table 17.

17.—Percentage of Claims Incurred to Premiums Written in Canada by All Companies Operating under Federal Registration, by Class of Risk 1954 and 1955

(Excluding all reinsurance ceded or assumed)

Class of Risk	1954	1955	Class of Risk	1954	1955
	p. c.	p. c.		p. c.	p. c.
Dwellings, excluding farms—			Lumber yards, pulpwood and standing		
Protected brick.....	57.23	42.63	timber.....	18.82	43.29
Protected frame.....	43.03	44.53	Wood-working plants.....	40.24	45.76
Unprotected.....	52.64	56.22	Metal-working plants, garages and		
Farm buildings.....	60.65	67.37	hangars.....	52.46	65.71
Churches, public buildings, educational			Mining risks.....	46.34	37.17
and social service institutions.....	51.59	57.02	Railway and public utility risks.....	49.77	60.74
Warehouses.....	51.94	49.05	Miscellaneous manufacturing risks.....	54.35	49.86
Retail stores, office buildings, banks			Miscellaneous non-manufacturing risks		
and hotels.....	51.57	53.94	Sprinklered risks of whatever nature		
Contents of above item.....	50.77	55.26	or occupancy.....	40.96	79.22
Foods, food and beverage plants.....	53.77	43.82	Use and occupancy and profits, ex-		
Flour and cereal mills, grain elevators..	20.14	25.27	cluding rental insurance.....	39.33	44.15
Oil risks of all kinds.....	52.89	50.83			
Saw and shingle mills.....	49.23	38.45	Averages.....	47.74	53.25

Subsection 2.—Fire Losses

The information in Tables 18 to 21, which deals with the loss of property and life caused by fire, has been summarized from the annual *Statistical Report of Fire Losses in Canada* prepared by the Dominion Fire Commissioner, Department of Public Works. Federal and other property losses not included in these figures amounted to \$8,621,910 in 1956 from 2,412 fires.

18.—Statistics of Fire Losses 1945-56

NOTE.—Figures for 1926-44 are given in the 1947 Year Book, p. 1078. Figures from 1898 may be obtained from the Dominion Fire Commissioner, Department of Public Works.

Year	Fires Reported	Property Loss ¹	Loss per Capita	Deaths by Fire	Year	Fires Reported	Property Loss ¹	Loss per Capita	Deaths by Fire
	No.	\$	\$	No.		No.	\$	\$	No.
1945.....	52,173	41,903,020	3.46	391	1951.....	60,317	76,919,357	5.64	535
1946.....	55,400	49,413,363	4.01	408	1952.....	64,057	80,690,123	5.74	572
1947.....	52,931	57,050,461	4.53	390	1953.....	67,519	84,270,896	5.70	477
1948.....	53,048	67,144,473	5.21	493	1954.....	68,638	91,440,478	6.01	479
1949.....	54,500	65,159,044	4.94	542	1955 ²	70,096	102,767,776	6.59	569
1950 ²	59,710	81,525,298	5.88	453	1956 ²	80,746	106,772,153	6.64	601

¹ Excludes forests, and federal and other property losses.

² Includes Newfoundland.

The provincial property losses for 1953-56 given in Table 19 include both insured and uninsured losses. The percentages of the provincial totals uninsured in 1956 were: Prince Edward Island 43; Nova Scotia 25; New Brunswick 33; Quebec 15; Ontario 13; Manitoba 17; Saskatchewan 3; Alberta 40; British Columbia 43; and the Yukon and Northwest Territories 69. Uninsured losses formed 21 p.c. of the total losses for Canada.

19.—Fire Losses by Province 1953-56

Province or Territory	1953	1954	1955	1956		
	Property Loss ¹			Fires Reported	Property Loss ¹	Loss per Capita
	\$	\$	\$	No.	\$	\$
Newfoundland.....			538,702	1,070	1,510,183	3.64
Prince Edward Island.....	231,616	452,644	878,124	377	444,180	4.47
Nova Scotia.....	2,957,326	2,892,511	2,495,579	1,944	4,024,029	5.79
New Brunswick.....	2,993,167	2,683,195	3,127,983	2,232	3,918,448	7.07
Quebec.....	31,676,545	28,926,095	38,060,125	36,901	36,900,300	7.97
Ontario.....	25,882,184	29,275,559	29,607,786	23,366	29,189,908	5.40
Manitoba.....	4,279,618	5,827,145	4,330,540	2,062	5,046,372	5.94
Saskatchewan.....	2,372,885	3,125,924	5,902,422	1,872	2,956,382	3.36
Alberta.....	5,652,339	7,657,085	6,810,883	2,883	6,840,901	6.09
British Columbia.....	8,080,490	10,177,702	10,889,620	7,838	15,308,745	10.95
Yukon and Northwest Territories.....	144,726	422,618	126,012	201	632,705	32.76
Canada.....	84,270,896	91,440,478	102,767,776	80,746	106,772,153	6.64

¹ Excludes forests, and federal and other property losses.

20.—Fire Losses by Type of Property 1954-56

Type of Property	1954 ¹		1955		1956	
	Fires Reported	Property Loss	Fires Reported	Property Loss	Fires Reported	Property Loss
	No.	\$	No.	\$	No.	\$
Residential.....	50,065	19,728,406	56,217	21,246,775	60,771	26,127,326
Mercantile.....	6,828	24,500,904	7,562	29,873,923	7,760	33,119,000
Farm.....	4,580	6,971,345	5,166	8,680,817	5,292	8,585,457
Manufacturing.....	1,171	11,863,899	1,773	23,942,323	1,292	13,604,843
Institutional and assembly.....	894	5,638,156	914	6,640,949	925	5,674,618
Miscellaneous.....	5,100	22,737,768	4,464	12,382,989	4,706	19,660,909
Totals.....	68,638	91,440,478	76,096	102,767,776	80,746	106,772,153

¹ Excludes Newfoundland.

21.—Value of Property Loss by Reported Cause of Fire 1954-56

Reported Cause	1954 ¹		1955		1956	
	Fires Reported	Property Loss	Fires Reported	Property Loss	Fires Reported	Property Loss
	No.	\$	No.	\$	No.	\$
Smokers' carelessness.....	27,156	5,637,005	29,202	4,583,118	30,974	5,150,175
Stoves, furnaces, boilers and smoke pipes.....	6,385	5,672,214	7,408	6,541,011	5,401	5,452,350
Electrical wiring and appliances.....	6,074	10,388,088	6,563	10,825,587	6,955	12,897,828
Matches.....	2,514	834,381	2,236	1,147,372	2,295	1,543,228
Defective and overheated chimneys and flues.....	2,519	2,414,627	2,937	2,222,319	4,632	3,179,316
Hot ashes, coals and open fires.....	2,178	1,651,821	2,099	1,426,240	1,986	1,477,492
Petroleum and its products.....	2,047	3,063,351	1,985	3,403,713	1,805	5,332,913
Lights, other than electric.....	1,316	1,462,033	1,434	1,298,240	1,480	1,989,111
Lightning.....	2,045	1,750,257	2,076	1,513,405	2,186	2,765,426
Sparks on roofs.....	470	364,170	476	474,312	475	558,156
Exposure fires.....	495	1,102,622	555	1,557,258	600	1,640,376
Spontaneous ignition.....	298	1,142,136	327	2,434,512	339	1,128,670
Incendiarism.....	299	1,556,006	307	1,910,512	317	2,011,835
Miscellaneous known causes (explosions, fireworks, friction, hot grease or metal, steam and hot water pipes, etc.).....	6,591	8,461,258	7,863	8,060,188	10,448	6,229,181
Unknown.....	8,251	45,940,509	10,628	55,369,989	10,853	55,416,096
Totals.....	68,638	91,440,478	76,096	102,767,776	80,746	106,772,153

¹ Excludes Newfoundland.

Subsection 3.—Casualty Insurance Business Transacted by Companies under Federal Registration

The various classes of casualty insurance are shown in Table 22. These figures relate only to companies registered by the Federal Government.

22.—Net Casualty Premiums Written, Premiums Earned and Claims Incurred in Canada, 1955 and 1956

NOTE.—Excluding marine insurance (see p. 1186). Less all reinsurance for Canadian companies and registered or licensed reinsurance only for British and foreign companies.

Class of Business	Premiums Written				Premiums Earned	Claims Incurred
	Canadian Companies	British Companies	Foreign Companies	Total	All Companies	All Companies
	\$	\$	\$	\$	\$	\$
1955						
Accident—						
Personal.....	1,477,130	1,674,352	5,491,400	8,642,882	8,362,008	3,593,008
Public liability.....	5,686,809	5,710,111	4,879,445	16,276,365	14,820,753	7,629,426
Employers liability.....	1,619,927	1,952,021	985,237	4,557,185	4,347,562	1,700,166
Combined accident and sickness.....	40,808,580	1,091,357	54,312,461	96,212,398	94,766,855	70,726,065
Aircraft.....	53,668	1,179,018	691,483	1,924,169	1,824,954	2,647,631
Automobile.....	78,869,157	43,924,307	56,410,302	179,203,766	172,639,957	99,191,842
Boiler—						
(a) Boiler.....	1,905,714	479,037	683,745	3,068,496	2,634,388	1,393,969
(b) Machinery.....	891,676	410,196	787,639	2,089,511	1,738,368	2,964,685

22.—Net Casualty Premiums Written, Premiums Earned and Claims Incurred in Canada, 1955 and 1956—concluded

Class of Business	Premiums Written				Premiums Earned	Claims Incurred
	Canadian Companies	British Companies	Foreign Companies	Total	All Companies	All Companies
	\$	\$	\$	\$	\$	\$
1955—concluded						
Credit.....	—	—	503,852	503,852	470,035	176,200
Earthquake.....	6,690	18,712	20,794	46,196	35,260	2,044
Explosion.....	482	3,255	10,743	14,480	15,073	69
Falling aircraft.....	—	—	40	40	47	—
Forgery.....	33,648	7,043	20,040	60,731	72,465	16,746
Guarantee—						
Fidelity.....	1,365,874	596,685	928,122	2,890,681	2,669,069	1,204,229
Surety.....	1,886,273	947,916	1,296,381	4,130,570	3,488,870	332,490
Hail.....	212,287	262,102	3,881,535	4,355,924	4,355,924	2,027,053
Inland transportation.....	824,546	1,417,668	2,812,010	5,054,224	4,874,826	2,456,303
Livestock.....	9,173	33,814	34,680	77,667	75,613	43,101
Personal property.....	4,512,882	8,445,407	12,219,079	25,177,368	21,662,065	10,912,095
Plate glass.....	708,137	605,622	519,016	1,832,775	1,788,793	929,542
Real property.....	51,909	474,475	477,590	1,003,974	701,353	403,131
Sickness.....	519,164	858,007	7,448,276	8,825,447	8,983,011	3,706,904
Sprinkler leakage.....	116	294	1,470	1,880	2,353	3,083
Theft.....	1,850,585	1,487,462	1,742,487	5,080,534	4,927,952	2,162,498
Water damage.....	—	—	21,137	21,137	17,189	2,365
Weather.....	—	—	22,244	22,244	22,244	10,973
Windstorm.....	145,489	6,038	53,350	204,877	244,019	109,293
Totals, 1955.....	143,439,916	71,584,899	156,254,558	371,279,373	355,521,006	214,344,911
1956						
Accident—						
Personal.....	1,570,779	1,938,966	6,295,888	9,805,633	9,404,606	4,160,412
Public liability.....	6,843,952	7,035,214	5,510,572	19,389,738	16,814,016	8,563,667
Employers liability.....	1,770,602	2,040,904	1,012,517	4,824,023	4,876,270	2,270,648
Combined accident and sickness.....	46,435,847	1,444,120	65,024,214	112,904,181	111,608,715	86,978,555
Aircraft.....	86,357	1,321,901	478,199	1,886,457	1,995,652	1,688,455
Automobile.....	83,866,754	47,211,540	62,248,958	193,327,252	185,935,156	126,066,493
Boiler—						
Boiler.....	1,880,526	678,392	769,917	3,328,835	2,911,312	1,060,741
Machinery.....	766,569	412,242	723,768	1,902,579	1,948,880	—216,962
Credit.....	—	—	540,563	540,563	531,035	44,861
Earthquake.....	6,398	21,068	10,129	37,595	39,993	76
Explosion.....	396	5,088	1,022	6,506	7,119	104
Falling aircraft.....	—	—	40	40	—	—
Forgery.....	49,087	9,366	17,701	76,154	67,629	8,792
Guarantee—						
Fidelity.....	1,404,796	605,474	999,626	3,009,896	2,885,948	1,042,164
Surety.....	2,352,592	1,133,929	1,664,397	5,150,918	4,629,821	1,632,929
Hail.....	246,507	315,692	3,993,484	4,555,683	4,555,683	3,812,225
Inland transportation.....	996,282	1,666,755	3,156,843	5,819,880	5,363,510	2,927,053
Livestock.....	5,380	39,365	35,350	80,095	80,208	86,783
Personal property.....	5,641,776	10,934,658	14,410,021	30,986,455	26,507,341	18,574,298
Plate glass.....	700,799	562,610	489,924	1,753,333	1,832,159	1,146,319
Real property.....	92,009	1,103,434	690,842	1,886,285	1,210,382	1,000,081
Sickness.....	540,018	841,236	7,349,571	8,730,825	8,913,080	3,537,109
Sprinkler leakage.....	368	388	3,400	4,156	4,489	93
Theft.....	1,838,134	1,538,830	1,828,294	5,205,258	5,117,108	2,559,971
Water damage.....	—	—	9,334	9,334	15,552	14,921
Weather.....	20	—	14,227	14,227	14,227	10,105
Windstorm.....	167,683	14,919	39,191	221,793	226,152	160,575
Totals, 1956.....	157,263,631	80,876,091	177,317,992	415,457,714	397,496,103	267,131,048

A certificate of registration is not required for marine insurance and therefore operating results in Canada are not included in the above figures. They are as follows for the ten-year period 1947-56:—

<i>Year</i>	<i>Premiums</i>	<i>Claims Incurred</i>	<i>Under-writing Gain</i>
	\$	\$	\$
1947.....	7,932,404	4,529,161	1,031,313
1948.....	7,986,658	3,468,045	2,466,397
1949.....	7,715,671	4,327,555	1,342,088
1950.....	7,592,558	3,098,086	2,394,336
1951.....	8,908,639	4,670,972	1,716,201
1952.....	9,201,477	5,627,211	1,130,828
1953.....	9,429,278	5,413,073	1,192,584
1954.....	9,287,806	4,952,694	1,525,376
1955.....	10,061,418	6,068,437	782,632
1956.....	10,828,472	7,640,860	—362,076

Subsection 4.—Finances of Fire and Casualty Insurance Companies under Federal Registration

Tables 23 to 25 show the assets, liabilities, income and expenditure of registered companies transacting fire and casualty insurance in Canada from 1954 to 1956. Totals only are given because it is impossible for such companies to allocate their assets and liabilities and their general income and expenditure among the various types of business transacted.

23.—Assets of Canadian, British and Foreign Companies Transacting Fire and Casualty Insurance under Federal Registration 1954-56

<i>Assets</i>	<i>1954</i>	<i>1955</i>	<i>1956</i>
	\$	\$	\$
Canadian Companies¹ (In All Countries)			
Real estate.....	6,914,709	7,422,687	9,007,637
Loans on real estate.....	6,338,224	6,568,495	5,816,600
Bonds, debentures and stocks.....	257,319,278	279,549,310	297,017,474
Agents' balances and premiums outstanding.....	25,541,782	28,398,778	30,128,617
Cash.....	27,677,036	27,050,820	26,272,990
Interest and rents.....	2,025,393	2,267,675	2,466,014
Other assets.....	15,153,902	20,360,076	23,377,762
Totals, Canadian Companies.....	340,970,324	371,617,841	394,087,094
British Companies (In Canada)			
Real estate.....	2,170,271	2,657,692	1,264,411
Loans on real estate.....	606,046	847,124	859,776
Bonds, debentures and stocks.....	160,438,630	163,614,604	164,408,838
Agents' balances and premiums outstanding.....	18,266,938	19,848,581	22,107,838
Cash.....	16,494,685	14,515,929	11,420,337
Interest and rents.....	841,129	812,512	873,913
Other assets in Canada.....	4,082,131	3,845,147	6,550,982
Totals, British Companies.....	202,899,830	206,141,589	207,486,095
Foreign Companies (In Canada)			
Real estate.....	2,211,251	4,158,278	4,626,146
Loans on real estate.....	63,540	47,434	59,678
Bonds, debentures and stocks.....	215,407,577	233,810,248	240,259,386
Agents' balances and premiums outstanding.....	20,041,362	22,805,443	25,095,764
Cash.....	25,789,322	26,333,042	22,689,599
Interest and rents.....	1,663,526	1,783,223	1,995,143
Other assets in Canada.....	1,951,508	3,095,082	3,843,074
Totals, Foreign Countries.....	267,128,086	292,032,750	298,568,790

¹ Includes marine insurance.

24.—Liabilities of Canadian, British and Foreign Companies Transacting Fire and Casualty Insurance under Federal Registration 1954-56

Liabilities	1954	1955	1956
	\$	\$	\$
Canadian Companies¹ (In All Countries)			
Reserve for unsettled claims.....	59,602,482	67,881,148	76,880,794
Reserve of unearned premiums ²	95,971,400	104,649,191	112,185,882
Sundry items.....	58,565,853	61,852,301	68,466,364
Totals, Canadian Companies.....	214,139,735	234,382,640	257,533,040
Excess of assets over liabilities.....	126,820,589	137,235,201	136,554,054
Capital stock paid up.....	27,517,572	28,379,882	30,946,431
British Companies (In Canada)			
Reserve for unsettled claims.....	36,271,286	43,103,914	47,719,646
Reserve of unearned premiums ²	74,236,683	76,966,226	83,931,390
Sundry items.....	11,298,778	10,732,379	13,213,434
Totals, British Companies.....	121,806,747	130,802,519	144,864,470
Excess of assets over liabilities.....	81,093,083	75,339,070	62,621,625
Foreign Companies (In Canada)			
Reserve for unsettled claims.....	48,558,094	59,300,614	67,395,164
Reserve of unearned premiums ²	102,690,355	110,117,204	119,797,990
Sundry items.....	16,979,441	18,067,520	20,305,488
Totals, Foreign Companies.....	168,227,890	187,485,338	207,498,642
Excess of assets over liabilities, excluding capital.....	98,900,196	104,547,412	91,070,148

¹ Includes marine insurance.² Including all other policy reserves.

25.—Income and Expenditure of Canadian, British and Foreign Companies Transacting Fire and Casualty Insurance under Federal Registration 1954-56

Income and Expenditure	1954	1955	1956
	\$	\$	\$
INCOME			
Canadian Companies¹ (In All Countries)			
Net premiums written.....	197,795,818	215,628,633	231,948,646
Interest, dividends and rents.....	9,467,220	10,321,667	11,482,471
Sundry items.....	7,535,605	5,870,503	—482,095
Totals, Canadian Companies.....	214,798,643	231,829,803	242,949,022
British Companies (In Canada)			
Net premiums written.....	122,764,546	124,085,176	137,959,156
Interest, dividends and rents.....	2,841,89 ⁸	3,048,752	3,938,838
Sundry items.....	3,151	756	91
Totals, British Companies.....	125,609,595	127,134,684	141,898,085
Foreign Companies (In Canada)			
Net premiums written.....	193,649,129	209,316,215	233,808,586
Interest, dividends and rents.....	5,853,113	6,603,810	7,816,535
Sundry items.....	89,176	122,695	77,711
Totals, Foreign Companies.....	199,591,418	216,042,720	241,702,832

For footnotes, see end of table.

25.—Income and Expenditure of Canadian, British and Foreign Companies Transacting Fire and Casualty Insurance under Federal Registration 1954-56—concluded

Income and Expenditure	1954	1955	1956
	\$	\$	\$
EXPENDITURE			
Canadian Companies¹ (In All Countries)			
Net claims incurred.....	110,043,942	120,381,986	142,456,543
Commission and brokerage.....	33,727,087	36,409,970	38,361,161
Taxes excluding profit taxes.....	4,778,456	5,166,749	5,640,466
Dividends to policyholders.....	1,390,437	1,382,522	1,611,657
Income taxes.....	7,000,962	5,301,880	1,539,679
Losses from other sources.....	6,299,501	4,999,360	3,036,879
Other expenses.....	33,783,621	37,060,082	41,701,740
Totals, Canadian Companies.....	197,024,006	210,702,550	234,348,125
Excess of income over expenditure.....	17,774,637	21,118,253	8,600,897
British Companies (In Canada)			
Net claims incurred.....	61,503,150	67,852,656	81,330,253
Commission and brokerage.....	27,284,801	27,812,011	31,294,105
Taxes excluding profit taxes.....	3,042,018	3,129,970	3,423,321
Income taxes.....	2,103,838	4,556,772	—10,814
Other expenses.....	21,554,873	23,460,437	26,178,892
Totals, British Companies.....	115,488,680	122,811,846	142,215,757
Excess of income over expenditure.....	10,120,915	4,322,838	—317,672
Foreign Companies (In Canada)			
Net claims incurred.....	107,764,865	121,483,538	150,163,172
Commission and brokerage.....	34,639,756	37,201,746	41,707,872
Taxes excluding profit taxes.....	4,570,515	4,956,286	5,578,549
Dividends to policyholders.....	4,159,241	4,455,425	3,912,471
Income taxes.....	4,516,199	3,169,682	535,749
Losses from other sources.....	2	115,659	—23,100
Other expenses.....	31,977,143	35,296,624	40,801,873
Totals, Foreign Companies.....	187,627,719	206,678,960	242,676,586
Excess of income over expenditure.....	11,963,699	9,363,760	—973,754

¹ Includes marine insurance.² Included with "Dividends to policyholders".

26.—Recapitulation of Finances of all Fire and Casualty Insurance Companies Operating in Canada under Federal Government Registration 1955 and 1956

Companies	Assets	Liabilities	Excess of Assets over Liabilities	Income	Expenditure	Excess of Income over Expenditure
	\$	\$	\$	\$	\$	\$
1955						
Canadian (in all countries)....	371,617,841	234,382,640	137,235,201	231,820,803	210,702,550	21,118,253
British (in Canada).....	206,141,589	130,802,519	75,339,070	127,134,684	122,811,846	4,322,838
Foreign (in Canada).....	292,032,750	187,485,338	104,547,412	216,042,720	206,678,960	9,363,760
Totals, 1955.....	869,792,180	553,670,497	317,121,683	574,998,207	540,193,356	34,804,851
1956						
Canadian (in all countries) ...	394,087,094	257,533,040	136,554,054	242,949,022	234,348,125	8,600,897
British (in Canada).....	207,486,095	144,864,470	62,621,625	141,898,085	142,215,757	—317,672
Foreign (in Canada).....	298,568,790	207,498,642	91,070,148	241,702,832	242,676,586	—973,754
Totals, 1956.....	900,141,979	609,896,152	290,245,827	626,549,939	619,240,468	7,309,471

Section 3.—Government Insurance

In addition to the insurance provided by private insurance companies, various types of government insurance schemes have been adopted in recent years by the federal and provincial governments.

Information on unemployment insurance, health insurance, veterans insurance, export credits insurance, etc., will be found in the appropriate Chapters on Labour, Health and Welfare, Foreign Trade, etc.

Provincial Insurance Schemes.*—Saskatchewan.—The Saskatchewan Government Insurance Office, a Crown corporation established by the Saskatchewan Government Insurance Act 1944, commenced business May 1, 1945; it deals in all lines of insurance other than sickness, life and hail.

It administers the Automobile Accident Insurance Act which provides compensation for the victims of automobile accidents as well as property damage in such accidents. The Act provides Saskatchewan residents with personal injury coverage without regard to liability and, in addition, all Saskatchewan motorists enjoy public liability and comprehensive protection including fire, theft and collision coverages.

The Office, in co-operation with the Saskatchewan Department of Natural Resources, administers a trust fund made up of a portion of hunting licence fees and insurance premiums, to compensate farmers for damage done to their crops by certain forms of wildlife, chiefly ducks, geese and deer.

Information regarding the operation of the Saskatchewan Government Insurance Office or the Automobile Accident Insurance Act may be obtained from the Promotion and Advertising Department of the Saskatchewan Government Insurance Office, 11th and Cornwall Streets, Regina, Sask.

Alberta.—Provincial Government insurance in Alberta, coming within the purview of the Alberta Insurance Act, relates firstly to the Alberta General Insurance Company, in which the entire business of the fire branch of the Alberta Government Insurance Office was vested by the Legislature on Mar. 31, 1948, and secondly to the Life Insurance Company of Alberta, which was constituted on the same date to take over the life branch of the Alberta Government Insurance Office. Each company is administered by a separate board of directors. The Lieutenant-Governor in Council appoints the members to the respective boards but the charter of the Life Insurance Company of Alberta provides for the election of two policyholder directors. While both companies are Crown corporations, they are not entitled to the usual immunities of the Crown, since they may sue and be sued in any court of competent jurisdiction.

A variety of agencies in Alberta offer forms of prepaid protection corresponding to insurance but the nature of the enabling legislation governing these plans emphasizes the fact that they do not constitute insurance. Because such exemptions are specifically provided by the insurance laws of the Province, reference to these plans is necessary only to make it clear that they do not come within the scope of the Alberta Insurance Act.

It should be noted that the Alberta Hail Insurance Act is administered by the Provincial Treasurer but none of the provisions of the Alberta Insurance Act apply to the Alberta Hail Insurance Board.

Information on insurance matters additional to that set out above may be obtained from the Superintendent of Insurance, Department of the Provincial Secretary, Edmonton, Alta.

* Revised by the respective provincial governments.

CHAPTER XXVIII.—DEFENCE OF CANADA

CONSPECTUS

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NOTE.—The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.

PART I.—THE ARMED SERVICES AND DEFENCE RESEARCH*

Section 1.—The Department of National Defence

The Minister of National Defence exercises control over and management of the Canadian Armed Forces, the Defence Research Board and other matters relating to national defence. Under his direction the three Chiefs of Staff are responsible for the control and administration of their respective Services and the Chairman of the Defence Research Board is responsible for the Defence Scientific Service. The Chairman of the Chiefs of Staff Committee, appointed in 1951, is responsible to the Minister ensuring that all matters of joint defence and defence policy, in its widest sense, are carefully examined and co-ordinated before decisions are made.

The civilian administration of the Department is organized under the Deputy Minister and is constituted on a functional basis. The Deputy Minister maintains a continuing review and control over the financial aspects of operational policy, logistics, and personnel and administration. The Deputy Minister is assisted by an Associate Deputy Minister and four Assistant Deputy Ministers each of whom administers a division of the Deputy Minister's branch responsible for matters of: administration and personnel; construction, engineering and properties; finance; and supply. Also responsible to the Deputy Minister are: the Controller General of Inspection Services, the Judge Advocate General, the Chief Secretary and, where staff matters are concerned, the Director of Public Relations.

A number of committees meet at regular intervals to consider and advise on joint issues. These include:—

- (1) **Defence Council.**—Composed of the Minister of National Defence (Chairman), the Associate Minister of National Defence (Vice-chairman), the Parliamentary Assistant to the Minister, the Deputy Minister, the Chairman of the Chiefs of Staff Committee, the three Chiefs of Staff, the Chairman of the Defence Research Board and the Associate Deputy Minister; its purpose is to advise the Minister on administrative and other matters.

* Prepared by the Office of the Deputy Minister, Department of National Defence, Ottawa.

- (2) **Chiefs of Staff Committee.**—Composed of the Chairman of the Chiefs of Staff, the three Chiefs of Staff and the Chairman of the Defence Research Board. The Deputy Minister of National Defence attends regularly and the Secretary to the Cabinet and the Under Secretary of State for External Affairs attend when required. The purpose of the Committee is to maintain a continuous review of all operational problems; sub-committees consider various aspects of these problems and report to the parent committee.
- (3) **Personnel Members Committee.**—Composed of the Chief of Naval Personnel, the Adjutant-General, the Air Member for Personnel, the Assistant Deputy Minister (Administration and Personnel), the Assistant Deputy Minister (Finance) and a representative of the Chairman of the Defence Research Board. The purpose of the Committee is to examine personnel problems of the three Services with the general aim of achieving uniform personnel policies; sub-committees consider various aspects of personnel problems and report to the parent committee.
- (4) **Principal Supply Officers Committee.**—Composed of the Chief of Naval Technical Services, the Quartermaster-General, the Air Member for Technical Services, the Assistant Deputy Minister (Requirements) and a representative of the Chairman of the Defence Research Board. The purpose of the Committee is to consider logistical problems; sub-committees consider various aspects of these problems and report to the parent committee.

Defence Supply Committee.—An inter-departmental committee composed of the Deputy Ministers of National Defence and of Defence Production and the senior military and civilian supply officers of the two departments has been established to review inter-departmental procurement and production problems and consider various policy aspects of the procurement of ammunition, armament, aircraft, etc. Eleven panels consider various aspects of these problems and report to the parent committee.

Liaison Abroad.—The Chairman of the Chiefs of Staff, who is the Canadian military representative in the North Atlantic Treaty Organization, is responsible for co-ordinating all NATO military matters and acts as a military adviser to Canadian NATO delegations. For purposes of liaison and the furtherance of international co-operation in defence, Canada also maintains: (1) Canadian Joint Staff (Washington) representing the three Services and the Defence Research Board; (2) Canadian Joint Staff (London) representing the three Services and the Defence Research Board; (3) Canadian Military Mission, Far East; and (4) Service Attachés in various countries throughout the world. In addition, a number of defence matters of concern to both Canada and the United States are considered by the Permanent Joint Board on Defence which is composed of representatives from the two countries.

Mutual Aid.—Canada's contributions to NATO are outlined on p. 113.

Rates of Pay and Allowances.—The entire pay structure for comparable ranks in the different Services is on a uniform basis. Monthly rates for pay and allowances are given in Table 1.

1.—Monthly Rates of Pay and Allowances for the Canadian Armed Forces, Effective May 1, 1957

Royal Canadian Navy	Canadian Army	Royal Canadian Air Force	Basic Pay	Pro-gressive Pay				Group Pay for Tradesmen and Specialists				Subsistence Allowance		Ration Allowance	Marriage Allowance	Separated Family's Allowance (with Children)		
				Years in Rank				Group				Personnel not in Receipt of Marriage Allowance				Personnel in Receipt of Sub-sistence Allowance	Personnel not in Receipt of Sub-sistence Allowance	
				3	6	9	1	2	3	4	Personnel not in Receipt of Marriage Allowance							
Ordinary Seaman (under 17 years)	Private recruit (under 17 years)	Aircraftman 2 (under 17 years)	\$ 52	—	—	—	—	—	—	—	—	61	\$ —	\$ 30	—	\$ —	—	
Ordinary Seaman (entry)	Private (recruit)	Aircraftman 2	104	—	—	—	12	30	54	72	61	91	30	61	30	30	61	91
Ordinary Seaman (trained)	Private (trained)	Aircraftman 1	110	—	—	—	12	30	54	72	61	91	30	61	30	30	61	91
Able Seaman	Private (higher rate)	Leading Aircraftman	127	20	12	—	12	30	54	72	61	91	30	61	30	30	61	91
Leading Seaman	Corporal	Corporal	170	3	3	3	12	30	54	72	61	91	30	61	30	30	61	91
Petty Officer 2	Sergeant	Sergeant	194	5	5	5	12	30	54	72	72	91	30	72	30	30	72	91
Petty Officer 1	Staff Sergeant	Flight Sergeant	217	5	5	5	12	30	54	72	81	91	30	81	30	30	81	91
Chief Petty Officer 2	Warrant Officer 2	Warrant Officer 2	251	5	5	5	12	30	54	72	81	91	30	81	30	30	81	91
Chief Petty Officer 1	Warrant Officer 1	Warrant Officer 1	280	5	5	5	12	30	54	72	92	102	30	92	30	30	92	102
Midshipman	—	—	145	—	—	—	—	—	—	—	61	91	30	61	30	40	61	91
Acting Sub-Lieutenant	Second Lieutenant	Pilot Officer	210	—	—	—	—	—	—	—	65	91	30	65	30	40	65	91
Sub-Lieutenant	Lieutenant	Flying Officer	265	35	15	—	—	—	—	—	89	110	30	89	30	40	89	110
Commissioned Officer	Officer commissioned from ranks	Officer commissioned from ranks	353	20	20	20	—	—	—	—	94	110	30	94	30	40	94	110
Lieutenant	Captain	Flight Lieutenant	355	30	30	30	—	—	—	—	94	110	30	94	30	40	94	110
Lieutenant-Commander	Major	Squadron Leader	455	30	30	30	—	—	—	—	113	113	30	113	30	40	113	113
Commander	Lieutenant-Colonel	Wing Commander	555	35	35	35	—	—	—	—	126	126	30	126	30	40	126	126
Captain	Colonel	Group Captain	730	35	35	—	—	—	—	—	139	139	30	139	30	40	139	139
Commodore	Brigadier	Air Commodore	977	—	—	—	—	—	—	—	153	153	30	153	30	40	153	153
Rear-Admiral	Major-General	Air Vice-Marshal	1,161	—	—	—	—	—	—	—	165	165	30	165	30	40	165	165

Subsection 1.—The Royal Canadian Navy

Role and Organization.—The primary role of the Royal Canadian Navy is anti-submarine warfare in all its aspects. Because of the prospect of long-range submarines capable of launching nuclear missiles hundreds of miles off-shore against coastal and inland targets, the RCN and the RCAF have placed primary emphasis on the development of forward operational systems and new techniques for locating and dealing with hostile submarines far out at sea.

The Royal Canadian Navy comes under the central authority of the Chief of the Naval Staff at Naval Headquarters in Ottawa. The Flag Officer, Atlantic Coast, at Halifax, N.S., and the Flag Officer, Pacific Coast, at Esquimalt, B.C., exercise operational and administrative command of ships and establishments within the Atlantic and Pacific Coast Commands. The Naval Comptroller organization was established in 1956 to assist in the effective control of the use of manpower, material and financial resources of the Navy. The recruiting and training of officers and men of the Royal Canadian Navy (Reserve) is conducted mainly through 22 Naval Divisions across Canada under the overall command of the Flag Officer, Naval Divisions, with Headquarters at Hamilton, Ont. There are naval missions in London, England, and Washington, U.S.A., to maintain liaison with the Royal Navy and the United States Navy. As a result of Canada's NATO commitments, officers of the Royal Canadian Navy serve on the Staffs of: the Supreme Allied Commander, Atlantic, at Norfolk, Va., in the United States; the Commander-in-Chief, Eastern Atlantic Area, at Northwood in the United Kingdom; and the Commander-in-Chief, Western Atlantic Area, at Norfolk, Va. The Flag Officer, Atlantic Coast, holds the appointment of Commander, Canadian Atlantic Sub-Area.

The strength of the RCN on July 31, 1957, was 19,228 officers and men in the Regular Force and 5,156 in the Reserve Force.

Operations at Sea 1956.—The first of the RCN's new anti-submarine escort vessels, HMCS *St. Laurent*, commissioned late in 1955, participated in the Royal Escort of Her Majesty the Queen on the occasion of her state visit to Sweden in June 1956. This was the first occasion on which a ship designed and built in Canada had been so honoured. Earlier in the year important evaluation trials were carried out on the *St. Laurent*, not only by the RCN but also in co-operation with the Royal Navy and the United States Navy. These tests proved conclusively that the anti-submarine requirements of this class of vessel had been met and in certain instances expectations were exceeded. Three additional warships of the *St. Laurent* class—HMC Ships *Assiniboine*, *Ottawa* and *Saguenay*—joined the fleet during the year.

The Arctic patrol ship, HMCS *Labrador*, carried scientific parties into the icebound Gulf of St. Lawrence in February for the purpose of gathering marine data and conducting Gulf Stream surveys. During the summer months the *Labrador* surveyed hitherto uncharted waters in the Arctic and provided navigational aids for United States and Canadian ships carrying equipment and stores for supply of the Distant Early Warning radar system.

Goodwill missions were combined with normal training in the visit of RCN ships to more than 60 foreign ports in cruises ranging from the Arctic to South America and from Europe to Japan. During March, 16 warships from the Atlantic and Pacific Commands held combined exercises in the Caribbean area. Sailing from the Great Lakes Training Centre at Hamilton, Ont., ten ships provided sea training for more than 1,000 officers and men of the naval reserve. Canada provided an aircraft carrier, five destroyers and three submarines for the important NATO exercises "New Broom V" and "New Broom VI" in the spring and late summer. The RCN's new Bay class minesweepers participated in exercises with both NATO forces and the USN.

By the latter part of 1956 the RCN's light fleet carrier *Bonaventure* had successfully completed contractor's trials in anticipation of commissioning on Jan. 17, 1957. The *Bonaventure*, the first Canadian-owned aircraft carrier, incorporates an angled deck of the

latest design, mirror landing aids and steam catapults to enable her to handle modern high-speed aircraft. Naval fixed-wing aircraft and helicopters flew approximately 40,000 hours during 1956. The year was marked by the progressive replacement of *Sea Fury* fighters by *Banshee* all-weather jets and *Avengers* by Canadian-built anti-submarine *Trackers*. International interest was shown in experimental flights of helicopters from a landing platform on the frigate HMCS *Buckingham*. These experimental flights were sufficiently successful to warrant continuation. Late in 1956 naval helicopters, co-operating with the RCAF in transport duties during the construction of the Mid-Canada radar line, delivered 2,052 tons of air cargo and 1,176 persons in the Knob Lake area of Quebec.

During the Suez crisis in the late autumn of 1957, Canada's decision to participate in the United Nations Emergency Force, Middle East, resulted in the immediate recall from Scotland of the light fleet carrier *Magnificent* to Halifax, where she was stripped of armament and transformed into a troop and equipment transport. The prompt manner in which the *Magnificent* was made ready provided commendable evidence of top-level co-ordination between the Services and between naval planners and the dockyard staff at Halifax. The *Magnificent* sailed for the Middle East on Dec. 29 carrying troops, vehicles, aircraft and supplies for the United Nations Emergency Force.

During the Springhill, N.S., mine disaster in November naval helicopters flew more than 50 missions in three days, carrying injured miners, doctors, medical supplies, blood plasma, oxygen and other stores.

Training.—The major shore training establishments are HMCS *Stadacona* at Halifax, N.S.; HMCS *Naden* at Esquimalt, B.C.; HMCS *Cornwallis* near Digby, N.S.; and HMCS *Shearwater* near Dartmouth, N.S. Facilities at *Stadacona* and *Naden* include schools for general and specialized training, drafting depots, hospitals and accommodation facilities necessary for the maintenance of the ships based on each Coast. New-entry or re-entry training, 20 weeks in duration, is conducted at the basic training establishment HMCS *Cornwallis* and, during 1956, 2,349 men were enrolled. The new-entry training establishment HMCS *D'Iberville* at Quebec City gives all French-speaking personnel a basic knowledge of English and preliminary training in seamanship and professional naval subjects. After completing the course at *D'Iberville*, French-speaking new entries join classes at *Cornwallis*.

Trade and specialist training is conducted in various schools and training centres, including the naval supply school at HMCS *Hochelaga* at Montreal, which was re-commissioned Oct. 1, 1955. During 1956 a total of 2,592 men received such training. Certain specialized training in new equipment is undertaken at the manufacturing centres by men who later become instructors.

A three-year course for technical apprentices is given in the specially equipped training ship HMCS *Cape Breton*. Forty-four apprentices who commenced training in August 1952 were the first graduates of the course. They were assigned to duty in April 1956. The school of music in *Naden* conducts a two-year course for apprentice bandsmen; the first graduates of this course concluded training in February 1957.

Under the Regular Officer Training Plan, 27 graduate cadets were assigned to duty with the Navy during the year and another seven went on to the final year at university in special courses. There were 212 naval cadets in training under the Plan at the end of 1956, including six naval reservists. In addition, 16 cadets formerly from the lower deck received similar training.

Under the *Venture* Plan, which was introduced in 1954 to train young men for seven-year short-service appointments and which offers the opportunity of permanent commissions, 93 cadets graduated in August 1956 and were promoted to midshipmen. The midshipmen graduates underwent further training afloat or in shore establishments, 32 of them as naval aircrew by arrangements with the United States Navy. At the end of 1956, there were 127 cadets in training at *Venture* and 138 midshipmen in training ashore or afloat.

New Construction and Modernization.—At the end of 1956, 16 fighting ships and 14 auxiliary craft were under construction; the aircraft carrier *Bonaventure* had been completed during the year and was commissioned at Belfast, Northern Ireland, on Jan. 17, 1957. Of the 14-ship destroyer-escort program, four were in service at the end of 1956 and four more were scheduled to be commissioned during 1957.

One coastal minesweeper was completed in 1956 and five others were under construction for commission in 1957. These vessels will replace six ships of their class transferred to the French navy under Mutual Aid in 1954. Three inner patrol craft, two stores-ammunition lighters and one ocean-going tug were also completed in 1956. Five escort frigates were being modernized, four of them to be completed in 1957, and a coastal escort was being converted as an oceanographic survey vessel for purposes of research.

In naval aviation, a contract was placed in February 1954 for the production of 100 *CS2F-1 Tracker* twin-engined anti-submarine aircraft, for delivery at the rate of two per month. These aircraft, of which the first five were delivered in 1956, are replacing the single-engined anti-submarine *Avengers*. The *CS2F-1* represents a considerable advance in this aspect of naval aviation. A parallel contract for Wright engines for these aircraft was also placed; 57 were completed by Dec. 13, 1956.

Twenty-six out of 38 *F2H3 Banshee* twin-jet fighters, supplied by arrangement with the United States Navy, had been received by the end of 1956.

Royal Canadian Navy (Reserve).—Naval Divisions are established in the following centres:—

St. John's, Nfld., HMCS *Cabot*
 Corner Brook, Nfld., HMCS *Caribou*
 Charlottetown, P.E.I., HMCS *Queen Charlotte*
 Halifax, N.S., HMCS *Scotian*
 Saint John, N.B., HMCS *Brunswick*
 Quebec, Que., HMCS *Montcalm*
 Montreal, Que., HMCS *Donnacona*
 Toronto, Ont., HMCS *York*
 Ottawa, Ont., HMCS *Carleton*
 Kingston, Ont., HMCS *Cataraqui*
 Hamilton, Ont., HMCS *Star*

Windsor, Ont., HMCS *Hunter*
 London, Ont., HMCS *Prevost*
 Port Arthur, Ont., HMCS *Griffin*
 Winnipeg, Man., HMCS *Chippawa*
 Regina, Sask., HMCS *Queen*
 Saskatoon, Sask., HMCS *Unicorn*
 Calgary, Alta., HMCS *Tecumseh*
 Edmonton, Alta., HMCS *Nonsuch*
 Vancouver, B.C., HMCS *Discovery*
 Victoria, B.C., HMCS *Malahat*
 Prince Rupert, B.C., HMCS *Chatham*

Royal Canadian Navy (Reserve) Naval Divisions, commanded by reserve officers, are responsible for specialized training in one or other of the various phases of naval activity, such as Gunnery, Torpedo and Anti-Submarine and Seaward Defence, in addition to training in engineering, supply, electronics, etc. Assistance in instruction is provided by RCN officers and men. During 1956, the Great Lakes Training Centre at Hamilton undertook new-entry reserve training afloat in three coastal escort ships. A continuous aviation training program was implemented during the year in the five RCN(R) Squadrons: VC 920 (HMCS *York*, Toronto); VC 921 (HMCS *Cataraqui*, Kingston); VC 922 (HMCS *Malahat*, Victoria); VC 923 (HMCS *Montcalm*, Quebec); and VC 924 (HMCS *Tecumseh*, Calgary).

University Naval Training Divisions.—The University Naval Training Division program is designed to give instruction to students attending universities across Canada with the object of providing well-trained junior officers for the RCN and the RCN(R). The total training period is three years and cadets are required to complete three winter training periods, two summer periods and certain specified courses, after which suitable candidates receive promotion to Acting Sub-Lieutenant or Sub-Lieutenant, depending on academic status. During the year, UNTD cadets were in attendance at 31 universities and colleges across Canada.

The Royal Canadian Sea Cadets.—Royal Canadian Sea Cadets sponsored by the Navy League of Canada and supervised by the Royal Canadian Navy comprised 148 authorized corps in 1956. These were divided into seven Sea Cadet areas, supervised

by 16 naval officers, responsible to the Flag Officer, Naval Divisions. Instruction is carried out by RCSC officers. During the summer of 1956, two RCSC training establishments, one on each Coast, were activated, accommodating a total of 94 officers and 2,690 sea cadets. Thirteen seven-week courses, for 460 cadets were held in naval establishments and sea training was provided for 91 cadets in cruises ranging from two to 13 weeks. The strength of the corps on Dec. 1, 1956, was 1,021 Sea Cadet officers and 9,691 Sea Cadets.

Subsection 2.—The Canadian Army

Organization.—Army Headquarters at Ottawa, organized as the General Staff Branch, the Adjutant-General Branch and the Quartermaster-General Branch, conducts the planning and policy for the administration and training of the regular and reserve forces of the Canadian Army. Public relations, cadet services, military intelligence, chaplain services, provost and associated activities are directed through Commands by Army Headquarters. The five Commands and eight Areas are located as follows:—

<i>Commands</i>	<i>Headquarters</i>	<i>Areas and Headquarters</i>
Eastern Command.....	Halifax, N.S.....	(1) New Brunswick Area, Fredericton, N.B. (2) Newfoundland Area, St. John's, Nfld.
Quebec Command.....	Montreal, Que.....	(3) Eastern Quebec Area, Quebec, Que.
Central Command.....	Oakville, Ont.....	(4) Eastern Ontario Area, Kingston, Ont. (5) Central Ontario Area, Oakville, Ont. (6) Western Ontario Area, London, Ont.
Prairie Command.....	Winnipeg, Man.....	(7) Saskatchewan Area, Regina, Sask.
Western Command.....	Edmonton, Alta.....	(8) British Columbia Area, Vancouver, B.C.

The two main components of the Canadian Army are the Canadian Army (Regular) and the Reserves. The components of the Reserves are the Canadian Army (Militia), the Supplementary Reserve, the Canadian Officers' Training Corps (COTC), the Cadet Services of Canada and the Reserve Militia. Additional to but not an integral part of the Canadian Army are the Services Colleges (*see* pp. 1203-1205), officially authorized cadet corps, rifle associations and clubs.

The strength of the Canadian Army on July 31, 1957, was 46,440 officers and men in the Regular Force and 42,632 in the Reserve Force.

In 1953 the 1st Canadian Infantry Division was formed and, with the exception of a few units not required under present conditions, the Division has been activated. Divisional Headquarters and two-thirds of the Division are stationed and trained in Canada. The remaining third, one brigade group, is based in Germany.

Operations in 1956.—During early 1956 Canada and the other Commonwealth countries providing troops for service with the United Nations Command in Korea decided to reduce their contribution from a brigade group to a battalion group entitled the Commonwealth Contingent, Korea. The Canadian element of the Contingent was a detachment of approximately 30 officers and men of the Royal Canadian Army Medical Corps and the Royal Canadian Dental Corps.

As a result of Canadian membership in the International Supervisory Commissions for Vietnam, Laos and Cambodia, the Canadian Army continued to provide 125 officers and men for truce supervisory duties in Indo-China. In the late summer, after a one-year tour of duty, a man-for-man replacement program was carried out.

In connection with Canada's military obligations under NATO, the 2nd Canadian Infantry Brigade Group was still stationed in Germany in the area of Soest, Werl, Hemer and Iserlohn. It was to be relieved by the 4th Canadian Infantry Brigade Group in the autumn of 1957. Canadian troops continued to participate in training exercises with other NATO forces.

At the request of the United Nations, a force of approximately 800 officers and men of the Canadian Army was provided for service with the United Nations Emergency Force in the Middle East. The force consisted of supporting arms and services whose function was to provide communications, repair, maintenance and other administrative services for the United Nations Emergency Force. Part of the Canadian Army Force was sent to the Middle East by air in late November 1956, and the remainder, together with the equipment for the force, sailed aboard HMCS *Magnificent* on Dec. 29, 1956.

A parachute element of infantry, supporting units and an RCAF component continued training preparations to deal effectively with possible small invasions by an aggressor anywhere in Northern Canada.

Equipment.—The Canadian Army Equipment Development Program continues to concentrate on those fields particularly suited to Canadian capabilities and in which there are special Canadian needs. Particular attention has been given to the problem of living and operating in the North under the most severe and adverse conditions. The development and evaluation of defence equipment for atomic, biological and chemical warfare continued in close co-operation with the RCN, RCAF and Defence Research Board. The standardization program in the United States, United Kingdom and Canada and within NATO continues to promote the exchange of knowledge to the mutual advantage of the Armies concerned. Additional agreements were reached affecting procedures and equipment. The equipping of the Canadian Army with the new self-loading FN rifle, which fires the standard NATO 7.62 mm calibre round, began during 1957.

Training.—The policy of training is determined at Army Headquarters. General Officers Commanding Commands implement the training policy within their Commands, except for that conducted at Army and corps schools, which are under the direct supervision of Army Headquarters. The basic training of 6,540 recruits and the corps training of officers and men of the Canadian Army (Regular) was carried out at regimental depots, units, and corps schools. During 1956, 7,940 personnel attended courses at the schools of instruction. Promotion qualification examinations consisting of written and practical tests were held to qualify Regular and Militia officers for the ranks of Captain and Major; 61 candidates passed qualification examinations for selection to attend the Canadian Army Staff College, and 12 passed the entrance examination for the Royal Military College of Science. A training program was conducted during the winter months for all Regular officers to assist them in their professional knowledge. Militia Staff Course examinations were conducted for Militia officers to qualify Captains and Majors for Command and Staff appointments. Qualifying courses for Junior NCO's were conducted under General Officers Commanding Commands. Senior NCO courses were conducted at corps schools in accordance with training standards.

French and English-language training which is available to all ranks of the Canadian Army was conducted by Commands and AHQ. The Canadian Army Training School conducted six-month French-language courses for English-speaking officers and NCO instructors. A number of French-speaking potential NCO's have also received English-language training.

Officers from the United States, the United Kingdom, Australia, Pakistan, India, Norway, France and Italy attended courses at Canadian Army schools of instruction.

Trade and specialty training is given at corps schools and units. Where feasible the facilities of civilian schools are used to supplement training at Army establishments. Training is conducted in accordance with the appropriate training standard for each trade

or specialty. When required by technical developments in the Army, trades are revised and new trades are introduced. Trades relating to aircraft maintenance and repair are being studied in keeping with the decision that the Army will use certain aircraft.

The apprentice training program, inaugurated in January 1953, is designed to train selected young men as soldier tradesmen and to provide them with the requisite academic background to enable them to advance to senior non-commissioned ranks in the Army. A high entry standard has been set to ensure that the prospective soldier apprentice will be capable of absorbing trade and academic training, and also of developing the leadership qualities essential in senior NCO's. During 1956 an additional 486 apprentices were enrolled and 39 civilian teachers were employed to provide academic instruction for about 700 apprentice soldiers. Academic credits are obtained from the educational authorities of the province where the training is conducted. Apprentices receive trades training as clerks, cooks, carpenters, electricians, wireless operators, radar operators, radio mechanics, storemen, gun mechanics, vehicle mechanics and armourers. A balanced training program is designed to stimulate the interest of the apprentice. Military, trade, academic and recreational training are integrated. Separate messing, canteen and sleeping arrangements are provided for apprentices.

The training of the Mobile Striking Force continued throughout 1956. Airborne continuation training was carried out by each unit in conjunction with unit exercises. Mobile Striking Force units carried out exercises during the winter under cold weather conditions. Parachute and air supply courses were conducted at the Canadian Joint Training Centre at Rivers, Man., and courses in Arctic training at Fort Churchill, Man.

Collective training for units in Eastern Canada was conducted at Camp Gagetown, N.B., under the General Officer Commanding 1st Canadian Infantry Division, during the summer months and for units from Western Canada at Camp Wainwright, Alta., under the General Officer Commanding Western Command. All arms training was begun on the sub-unit and unit level, and culminated in exercises on the brigade and divisional level.

The Reserves.—Funds were provided to permit a maximum of 60 days training for the Militia during 1957, of which up to 15 days were to be camp training as determined by General Officers Commanding Commands. In the summer of 1956 a total of 21,000 all ranks attended summer camp training. The aim of training is to prepare the Militia for its role to assist in any future mobilization for active service or civil defence.

The Regular Officer Training Plan (ROTP).—The Regular Officer Training Plan is in effect at the three Canadian Services Colleges and at all Canadian universities and affiliated colleges which have contingents of the COTC. The purpose of the Plan is to train selected students for commissions in the Canadian Army (Regular). Students enrol in the Canadian Army (Regular) with a special rate of pay; tuition and the essential fees are paid and grants are given for books and instruments needed for study. In the period Jan. 1, 1954 to Dec. 31, 1956, 86 of these sponsored students graduated and were commissioned in the Canadian Army (Regular). Training consists of military studies, drill and physical training during the academic year; the summer term is devoted to practical training at military establishments.

The Canadian Officers' Training Corps (COTC).—In addition to the Regular Officer Training Plan, units of the Canadian Officers' Training Corps are maintained at Canadian universities to produce primarily, from among university undergraduates, officers for the reserve components of the Army. University graduates who have been members of the Canadian Officers' Training Corps are also eligible for commissions in the Canadian Army (Regular). Members of the COTC undertake the same training as members of the ROTP. In the period Jan. 1, 1954 to Dec. 31, 1956, 24 officers who had trained with the COTC were awarded commissions in the Canadian Army (Regular.)

Army Cadets.—The number of Royal Canadian Army Cadets training during 1955-56 was 61,480, enrolled in 560 cadet corps. Training was conducted by 1,382 Cadet Services of Canada officers and 968 civilian instructors assisted by Canadian Army Regular and

Militia personnel. During the summer of 1956, 5,968 cadets spent seven weeks at cadet summer camps located at Aldershot, N.S., Farnham, Que., Camp Borden, Ont., Ipperwash, Ont., Dundurn, Sask., and Vernon, B.C. During these summer camps cadets were qualified as either cadet leaders, cadet leader instructors, drivers mechanical transport or infantry signallers. In addition, 604 cadets of the minimum age of 14 years attended two-week summer camp at Aldershot, N.S., Picton, Ont., or Vernon, B.C. During these camps, cadets were qualified as Junior Leaders. The National Cadet Camp, operated annually at Banff, Alta., is an award camp for first class or master cadets who are selected from across Canada; in 1956, 229 such cadets attended. A total of 963 Cadet Services of Canada officers and civilian instructors attended cadet summer camps throughout Canada in 1956; of this number, 496 were undergoing training courses and 467 were employed on instructional duties.

Subsection 3.—The Royal Canadian Air Force

Organization.—Air Force Headquarters at Ottawa conducts the planning and policy for administration and training of the Regular and Reserve Forces of the RCAF. Organization is divided into four categories—resource controls, personnel, logistics, and plans and operations. The major formations and their headquarters locations are as follows:—

<i>Formation</i>	<i>Headquarters</i>
Air Defence Command.....	St. Hubert, Que.
5 Air Division.....	Vancouver, B.C.
1 Air Division.....	Metz, France
Air Transport Command.....	Lachine, Que.
Air Material Command.....	Rockcliffe, Ont.
Maritime Air Command.....	Halifax, N.S.
Training Command.....	Trenton, Ont.
1 Tactical Air Command.....	Edmonton, Alta.
14 Training Group.....	Winnipeg, Man.

The organization of the planned total of 40 squadrons was completed by December 1956 when 3,140 aircraft were in operation. Eighteen of the squadrons were for the air defence of Canada; 12 squadrons were stationed in France and Germany as No. 1 Air Division; six squadrons were required for RCAF transport operations at home and abroad; three maritime squadrons operated in conjunction with other forces for the defence of Canada's East and West Coasts; a photographic squadron of Transport Command, No. 408, flew about 598,000 miles during 1956 carrying out aerial survey operations, including special aerial survey work in conjunction with the Mid-Canada Early Warning radar system.

The strength of the Royal Canadian Air Force on July 31, 1957, was 50,931 officers and men in the Regular Force and 4,823 in the Auxiliary Air Force.

Operations in 1956-57.—During 1956, Air Defence Command continued its planned build-up. The Mid-Canada Early Warning system was well on the way toward completion. DEW line sitings were also completed and construction on the selected sites started. The RCAF Ground Observer Corps, which acts as a supplement to the radar system, included approximately 55,000 civilian volunteer members.

The *CF-100 IV* has been replaced in Canada by the *CF-100 V*, a version of the same aircraft with improved high-altitude performance. Improvements continued in air defence operational procedures. By the end of 1956 one of the *F-86* squadrons which was disbanded in No. 1 Air Division was re-formed in Canada using *CF-100* aircraft. Three additional squadrons were also re-formed in 1957.

No. 1 Air Division in Europe continued to fill Canada's commitment to NATO's integrated fighter force. The Air Division comprises eight *F-86* and four *CF-100* squadrons. Maritime Air Command aircrews participated in several NATO exercises in the Western Atlantic area in conjunction with United States and United Kingdom forces. National

anti-submarine exercises were also conducted with the RCN on both the East and West Coasts. The two RCAF East Coast squadrons were fully equipped with *P-2V7 Neptunes* while the West Coast squadrons retained the *Lancasters*. The *Argus*, the newest maritime patrol aircraft and largest aircraft built in Canada, made its inaugural flight early in 1957.

Air Transport Command continued to provide support to the Air Division in Europe using its *North Star* aircraft. *Fairchild C-119's* of the Command were engaged in cargo and personnel carrier operations in Canada, and paratroop training for the Canadian Army. Both types were used for operations in support of Arctic weather stations. Toward the end of 1956, *C-119's* of Air Transport Command were assigned to the air element of Canada's contribution to UNEF and commenced operations using Naples, Italy, as a base.

The 1957 Shoran Program of 408 Photographic Squadron of Air Transport Command completed the geodetic trilateration of the Arctic Islands. This completed the basic geodetic survey undertaken by the Squadron in 1948, under direction of the Dominion Geodesist.

In 1957, ice reconnaissance in support of United States Navy ships supplying DEW line stations between 128°W. longitude and Boothia Peninsula was undertaken jointly by 408 and 407 Squadrons. An ice reconnaissance detachment was established at Cambridge Bay and daily reconnaissance flights were carried out from July 15 to Oct. 1, 1957.

During the year ended Mar. 31, 1957, search and rescue operations required the RCAF to fly in excess of 7,948 hours; 29 major searches and 143 mercy missions were conducted, some well inside the Arctic Circle.

Training and Equipment.—During the year ended Mar. 31, 1957, NATO aircrew training in Canada continued at a brisk pace. As of Dec. 31, 1956, 4,483 aircrew had been graduated under this plan since its inception in 1951. In addition, the RCAF was engaged in training aircrew for its own requirements. Basic trades courses for non-flying list officers produced 140 graduates and basic trade schools graduated 4,676 tradesmen during 1956-57.

Flight cadets entering the service received officer development training and primary flying training at Centralia, Ont. Basic flying training was conducted at flying training schools located at Claresholm, Alta., Moose Jaw, Sask., and Penhold, Alta. Advanced flying training on twin-engine aircraft was given at Saskatoon, Sask., and advanced flying training on jet aircraft was conducted at Portage La Prairie, Gimli, and MacDonald, Man. Flying instructor training was given at Trenton, Ont., and instrument rating courses were conducted at Saskatoon, Sask. Radio officers and observers received their basic and advanced training at Winnipeg, Man.

Formal trade courses for newly commissioned non-flying list officers were conducted at RCAF schools in aeronautical engineering, armament, supply, telecommunications and flying control. Aircraft system trainers were used extensively to support technician and aircrew training programs at field technical training units and the operational training units. Trade advancement training programs, continued at all units, both regular and auxiliary. To help tradesmen advance into the qualified trade group levels, semi-annual trade examinations were written under the direction of a Central Examination Board. Language training programs were conducted where necessary.

The aircraft procurement program during 1956 and 1957 is dealt with under Defence Production at pp. 1205-1209.

RCAF Reserve.—The sub-components of the RCAF reserves are designated as: (1) the Auxiliary; (2) the Primary Reserve; and (3) the Supplementary Reserve.

During the year ended Mar. 31, 1957, officer development courses were conducted for university flight cadets of the Primary Reserve. They participated in their first summer training program at the Reserve Officers School, St. Johns, Que., and at the Regular Officers School, London, Ont. Following this initial training, pilot trainees received flying training at various training schools while observer trainees were trained at the

Air Observers School, Winnipeg, Man. Non-flying list flight cadets continued with basic courses in aeronautical engineering, telecommunications, armament, supply and accounts. Flight cadets in the medical, air services and personnel lists were employed at Regular Force units on contact training and second and third-year flight cadets continued with formal or contact training as applicable. Third-year cadets were commissioned after successfully completing their period of training.

Refresher flying training was provided during the year for 500 Reserve pilots, to build up a pool of flying instructors. In addition, 475 Reserve officers and senior NCO's received contact training for mobilization assignments. The Reserve Tradesmen Training Plan was continued and approximately 1,739 recruits, both high school students and air cadets, completed training during 1956.

To provide a reserve of fighter pilots proficient in handling jet aircraft the RCAF maintains six Auxiliary Fighter squadrons. Three Auxiliary Transport squadrons are maintained to train a reserve of transport aircrew and two Auxiliary squadrons are equipped with *Mitchell* light bombers to operate, as required, with Canada's Mobile Striking Force. In addition, the RCAF maintains 17 Auxiliary Medical units, 17 Aircraft Control and Warning squadrons, 8 Technical Training units and 4 Auxiliary Intelligence units.

Royal Canadian Air Cadets.—Air cadet activities in Canada are sponsored and administered by the Air Cadet League of Canada. The League is a voluntary civilian organization formed in 1940 to provide preliminary aviation training for potential members of the Royal Canadian Air Force. The RCAF works jointly with the League and provides training personnel, syllabi and equipment.

During the War, the Royal Canadian Air Cadets reached a peak enrolment of 30,000. The authorized peacetime strength ceiling has recently been increased to 25,500 and the strength in April 1957 was approximately 22,000, enrolled in 297 squadrons across Canada. Air cadet training is carried out in more than 225 communities from Newfoundland to British Columbia.

During the summer of 1957 camps for air cadets were held at RCAF Stations at Greenwood, N.S., Clinton, Ont., and Sea Island, B.C. More than 5,400 cadets attended camp along with their officers and instructors. A seven-week course for senior leaders and drill instructors was held for 200 cadets at RCAF Station Camp Borden, Ont. A precision drill team of 40 cadets selected from the drill instructor course competed in the international drill competition at Toronto.

The International Exchange Visits Program in 1957, sponsored jointly by the RCAF and the Air Cadet League, was very successful. Fifty-eight cadets were exchanged with the United Kingdom, the United States, Denmark, the Netherlands, Norway and Sweden.

Two hundred and fifty senior air cadets receive flying training annually at flying clubs through scholarships awarded by the RCAF. Additional flying training scholarships were awarded by the Air Cadet League and other organizations. Under the Reserve Tradesmen Training Plan, air cadets receive trades training in a nine-week summer course in addition to preparatory training with their respective squadrons during the school year.

Subsection 4.—The Defence Research Board

The activities of the Defence Research Board in 1956 were concerned primarily with naval, armament, telecommunications, Arctic, special weapons, operational, medical, aeronautical and materials research problems of specific interest to Canadian defence. To conduct this program of research, the Defence Research Board operates 11 specialized research and development establishments, and organizes and supports research on problems of defence interest in universities and other agencies. Research on naval problems is carried out at the Naval Research Establishment, Dartmouth, N.S., and at the Pacific Naval Laboratory, Esquimalt, B.C. Both stations are located adjacent to Royal Canadian

Navy bases and work closely with the RCN, particularly on problems related to anti-submarine devices. Other major naval research investigations undertaken concern corrosion, marine paints, and underwater sound behaviour.

Research and development of weapons and armament is undertaken by the Defence Research Board in co-operation with the Armed Services at various establishments. The largest of these is the Canadian Armament Research and Development Establishment near Valcartier, Que. Its principal activities include research on new explosives and propellants, and development and testing of new and improved weapons.

Research on telecommunications is carried out in two laboratories—the Radio Propagation Laboratory at Shirley Bay, Ottawa, and the Electronics Laboratory on the Montreal Road, Ottawa. These two laboratories, known collectively as the Defence Research Telecommunications Establishment, are primarily concerned with research in problems of communications and air navigation, with particular emphasis on basic research in the fields of radio propagation and electronic component development.

Research dealing with problems in Arctic operations is conducted at the Defence Research Northern Laboratory, Fort Churchill, Man. The activities of DRNL have recently changed considerably. Its major effort has been devoted to the Canadian Geophysical Year (IGY) program and the associated United States IGY rocket program at Churchill.

Special weapons is the generic term used to cover research on the defensive aspects of chemical, biological, and atomic weapons. This work is carried out at the Defence Research Chemical Laboratories at Ottawa; the Suffield Experimental Station at Ralston, Alta.; the Defence Research Kingston Laboratory at Barriefield, Ont.; and at the Department of Agriculture isolation station at Grosse Île, near Quebec City.

Military, psychological, clothing and food research is carried out at the Defence Research Medical Laboratories near Toronto, and in Canadian universities by means of a grant-in-aid program. Aviation medicine is an important field of activity but investigations include naval and army problems as well as studies on blood substitutes, infection and immunity, burns and wounds, the effects of noise on hearing, and other factors likely to affect a military man's efficiency and health.

Most of the basic aeronautical research program is carried out in Canadian universities. The principal fields covered are aerodynamics, aircraft propulsion and engineering materials. Applied research is carried out at the National Aeronautical Establishment at Ottawa, and by contracts with industry. A titanium research program continues to be the major investigation in the materials field. This is carried out by the Mines Branch of the Department of Mines and Technical Surveys, and the Universities of Toronto, Laval and Montreal, in co-operation with various industrial firms.

Another field receiving increased emphasis is the radio propagation problem caused by the disturbances in the upper atmosphere. This distinctly Canadian problem has been recognized as an important one with relation to military communications in the North, and the Defence Research Board has granted assistance to the University of Saskatchewan for the establishment of an Institute of Upper Atmosphere Physics, where research on fundamental problems of the upper atmosphere will be conducted, and where postgraduate training will be given.

Thus, the Board continues to support those fields of research that are of foremost interest to the Canadian Armed Services, and the program is under continual review to ensure that cognizance is taken of all changes in emphasis in defence requirements. Close liaison is maintained between the Defence Research Board and the Department of Defence Production to ensure that research and development activities are closely integrated with production.

Section 2.—Services Colleges and Staff Training Colleges

Canadian Services Colleges.—The three Canadian Services Colleges are the Royal Military College of Canada founded at Kingston, Ont., in 1876, Royal Roads which was established in 1941 near Victoria, B.C., as a school for naval officers and Collège Militaire Royal de Saint-Jean established at St. Johns, Que., primarily to meet the needs of French-speaking cadets. The Royal Military College and Royal Roads were constituted as the Canadian Services Colleges in 1948, and Collège Militaire Royal de Saint-Jean was opened in 1952.

The purpose of the instruction and training at the Services Colleges is to impart the knowledge, to teach the skills and to develop the qualities of character and leadership essential to officers of all three Armed Services. The courses of instruction provide a sound and balanced liberal, scientific and military education; the organization and training give cadets the opportunity to command and to exercise judgment.

For cadets entering the Royal Military College and Royal Roads the course is of four years duration. As the third and fourth years of the college course are given only at the Royal Military College, cadets entering Royal Roads must proceed to that College for the final two years of the general or engineering courses. For cadets entering Collège Militaire Royal, which gives a preparatory year, the course is of five years duration. Cadets take the preparatory, first and second years at that institution and complete the final two years at the Royal Military College.

The College year is eleven months, divided into three terms: autumn, winter and summer. The months September to April are devoted to academic training supplemented by such military studies as drill and physical training. The summer term, May to mid-August, is spent in practical training at an establishment of the Service in which the cadet is enrolled. Academic requirements for admission to the first year at the Royal Military College and Royal Roads is senior matriculation (or its equivalent) in the following subjects: English, physics, mathematics (algebra, geometry and trigonometry), chemistry and either history or a language, preferably French. French-speaking candidates having a B.A. degree from a classical college may be accepted directly into the first year at Collège Militaire Royal. For admission to the preparatory year at that institution the academic requirement is junior matriculation (or its equivalent) in English, French, algebra, geometry, physics and chemistry, although consideration is given candidates who do not possess the standing in French. Candidates from the classical colleges require at least sixth-year standing.

To be accepted a candidate must be single, a Canadian citizen or British subject normally resident in Canada and physically fit in accordance with the medical standards of the Service in which he enrolls. The age limits for admission to the first year are between 16 and 21 years as of Jan. 1 of the year of entry; for admission to the preparatory year a cadet must have reached his 16th but not his 20th birthday on Jan. 1 of the year of entry. Personal interview and medical examination of candidates is carried out by tri-Service boards located at six regional centres across Canada. Three officers representing the Services and a representative of the Services Colleges sit on each interview board. Fifty per cent of the cadets entering the first year at the Services Colleges are selected on the basis of provincial quotas as determined by population and the remainder are selected in open competition. The interview boards base their recommendations on the physical and personal qualifications of the candidates, with responsibility for final selection resting with a board appointed by the Minister of National Defence.

Since September 1954 virtually all cadets entering the Services Colleges have been required to enrol under the Regular Officer Training Plan. Under this Plan applicants accepted for entry enrol, according to their choice, as naval cadets in the Royal Canadian Navy, as officer cadets in the Canadian Army or as flight cadets in the Royal Canadian Air Force. All costs of tuition, board, lodging, uniforms, books, instruments and other essential fees are borne by the Department of National Defence, and cadets are paid at the

rate of \$63 a month. On successfully completing their academic and military training cadets are granted permanent commissions in the regular force but may, if they so wish, apply for release after three years of service following completion of academic training.

The only cadets now accepted at the Services Colleges in a reserve capacity are those who qualify for Dominion Cadetships, which are awarded by the Government in recognition of sacrifice of a candidate's father. A maximum of 15 Cadetships may be awarded in any one year, five in each Service. Each is valued at \$580, which covers first-year fees.

During the 1956-57 academic year, 963 cadets were in attendance at the Canadian Services Colleges; 421 of them at Royal Military College, 194 at Royal Roads and 348 at Collège Militaire Royal de Saint-Jean. Of the total, 192 were enrolled in the Navy, 394 in the Army and 377 in the Air Force.

Staff Training Colleges.—The Canadian Army Staff College at Kingston, Ont., trains officers for staff appointments in field formations and commands. The course extends from January to November. Though most of the student body is comprised of Canadian Army officers, officers from the other two Services and from the armies of other Commonwealth and NATO countries also attend. Canadian Army officers must pass a searching entrance examination before being considered eligible for staff training. The system of instruction is based upon the study of précis and other references, demonstrations and lectures, indoor and outdoor exercises. Most of the work is carried on in syndicates, each under a member of the directing staff. Attention is paid to both individual and team work. Aside from purely military subjects such as the study of modern tactics, the curriculum includes world affairs and lectures by prominent guest speakers.

The National Defence College at Kingston, Ont., opened on Jan. 5, 1948, is a senior defence college providing an eleven-month course of study covering the economic, political and military aspects of the defence of Canada. Senior officers and civil servants from the Armed Forces and government departments attend as well as a few representatives from industry. An extensive lecture course is provided, with lecturers chosen from leaders in various fields in Canada, the United States, the United Kingdom and other countries. In addition, educational tours and visits to certain parts of Canada, the United States, Europe and the Middle East are made to give students more knowledge of conditions and influences in their own and other countries. The ninth course, from September 1955 to July 1956, was attended by 29 students, three from the Royal Canadian Navy, four each from the Canadian Army and the Royal Canadian Air Force, one from the Defence Research Board, two from the Department of External Affairs, one each from the Department of National Defence, the Department of Trade and Commerce, the Department of Transport (Air), the Royal Canadian Mounted Police, the Canadian Broadcasting Corporation, The Bell Telephone Company of Canada and the Canadian Pacific Railway. Representation from outside Canada included one member each from the Royal Navy, the Royal Air Force, the British Army, the Foreign Office of the United Kingdom, the United States Navy, the United States Air Force, the United States Army and the State Department of the United States.

The Royal Canadian Air Force Staff College at Armour Heights in Toronto, Ont., is a permanent establishment preparing officers for staff appointments in the Air Force. The course affords advanced Service education for officers normally of Wing Commander and Squadron Leader ranks, fitting them for appointments appropriate to their present ranks and preparing them to assume higher appointments. The Directing Staff selected from the Royal Canadian Air Force is augmented by an exchange officer from the Canadian Army and one from the Royal Air Force. The student body in addition to Royal Canadian Air Force officers has one or two representatives each from the Royal Canadian Navy, the Canadian Army, the Royal Air Force and the United States Air Force. The objective of the course is to assist the student to think logically and express his ideas with precision both orally and in writing, to know his Service and understand the employment of air forces, to keep abreast of scientific and technical development that may affect the employment of air forces and to gain a perspective of national and international problems.

Lecturers are drawn, when desirable, from industry, the Armed Forces, the diplomatic corps and universities. Instructional visits are made to commercial and military establishments at home and abroad.

PART II.—DEFENCE PRODUCTION*

The Department of Defence Production was established on Apr. 1, 1951, under the provisions of the Defence Production Act (R.S.C. 1952, c. 62 as amended) with exclusive authority to procure the goods and services required by the Department of National Defence and to ensure that the necessary production capacity and materials would be available to support the defence production program. The Department also buys material for the civil defence program and serves as procurement agent for the Canadian Commercial Corporation, a Crown company primarily responsible for the purchase in Canada of defence goods required by other governments and of supplies needed to meet Canadian commitments under the Colombo Plan and other international agreements. Military construction is the main responsibility of Defence Construction (1951) Limited, a Crown company reporting to Parliament through the Minister of Defence Production.

During the period Apr. 1, 1951, to the end of 1957, the Department of Defence Production and Defence Construction (1951) Limited placed defence contracts on behalf of the Department of National Defence to a total net value of \$6,753,000,000. Against these contracts, and some \$400,000,000 worth of contracts taken over in 1951 from other agencies, expenditures amounting to \$6,690,000,000 were made from appropriations of the Department of National Defence. The significant role of procurement and construction in Canada's defence preparedness program is shown by the fact that 58 p.c. of total defence expenditures by the Department of National Defence since Apr. 1, 1951, was made against contracts placed by the Department of Defence Production and Defence Construction (1951) Limited. In addition, the Department assisted defence contractors in meeting these requirements by making available specialized capital assets worth \$183,500,000 and also approved accelerated depreciation on capital assets having an estimated value of \$737,000,000. The aircraft program (including miscellaneous government-furnished aircraft equipment) accounted for 37 p.c. of the total net value of contracts placed from Apr. 1, 1951 to Dec. 31, 1957, the construction program for 12.5 p.c., the electronics and communication equipment program for 10.3 p.c., and the ship program for 7.4 p.c.

The following procurement and construction review covers the years 1956 and 1957, continuing that for 1954 and 1955 given in the 1956 Year Book, pp. 1169-1175.

The net value of contracts placed in 1956 totalled \$746,500,000, which was an increase of 2.8 p.c. over the \$726,200,000 placed in 1955, but dropped 18.8 p.c. in 1957 to a level of \$606,100,000. Contracts and amendments placed under the aircraft program amounted to \$194,000,000 in 1957 as compared with \$236,200,000 in 1956, accounting for almost one-third of the total net value of contracts placed in both years. A substantial portion of the contracts and amendments issued in connection with the aircraft program during these two years was for the *CF-105* jet interceptor fighter, the *CP-107* maritime reconnaissance aircraft, the *CC-106* military transport aircraft and *Sparrow II* guided missiles for the Royal Canadian Air Force; and for the *Grumman CS2F* carrier-based aircraft for the Royal Canadian Navy. The value of contracts placed for the electronics and communication equipment program increased during 1956 and 1957 primarily as a result of equipment and management requirements for the Mid-Canada Early Warning radar line. The value of procurement for fuels and lubricants increased 17 p.c. in 1956 over 1955 but fell off slightly in 1957. Other programs such as ships, tank-automotive, weapons, and clothing and equipment recorded declines in both years. Construction contracts declined from \$138,400,000 in 1955 to \$125,000,000 in 1956, and, as a result of the completion of the Mid-Canada line and Camp Gagetown, fell to \$60,300,000 in 1957. The net value of contracts placed, as used here, includes the value of new contracts issued as well as the value of amendments which increase or decrease commitments under existing contracts.

* Prepared by the Economics and Statistics Branch, Department of Defence Production, Ottawa.

1.—Net Value of Canadian Government Defence Contracts Placed, by Program 1956 and 1957 with Cumulative Totals from 1951

Program	1956	* 1957	Total Apr. 1, 1951- Dec. 31, 1957
	\$'000	\$'000	\$'000
Aircraft.....	236,175	193,950	2,502,804
Ships.....	61,160	55,743	499,804
Tank-automotive.....	13,464	12,277	296,484
Weapons.....	9,551	Cr. 18,064	176,314
Ammunition and explosives.....	8,012	6,497	298,103
Electronics and communication equipment.....	105,304	123,209	698,069
Fuels and lubricants.....	64,156	58,231	336,757
Clothing and equipage.....	12,108	7,614	254,335
Construction.....	125,052	60,316	846,657
Other.....	111,489	106,279	843,547
Totals.....	746,501	606,054	6,752,874

The value of expenditures on defence procurement and construction, which reached a peak in 1953, continued to decline in 1956 and 1957. Expenditures in 1956 decreased by 2.4 p.c. from the preceding year to \$958,500,000 and by a further 9.3 p.c. in 1957 to \$869,600,000. In the aircraft and ships programs, expenditures declined in 1956 but increased slightly in 1957. In electronics and communication equipment and in construction the reverse movement took place, with expenditures increasing in 1956 and decreasing in 1957. The tank-automotive, weapons, ammunition and explosives, and clothing and equipage programs all registered declines in both years. Expenditures on defence construction increased 45 p.c. in 1956 over 1955 but declined by one-third to \$105,400,000 in 1957.

2.—Value of Expenditures on Canadian Government Defence Contracts, by Program 1956 and 1957 with Cumulative Totals from 1951

Program	1956	1957	Total Apr. 1, 1951- Dec. 31, 1957
	\$'000	\$'000	\$'000
Aircraft.....	329,671	346,435	2,548,436
Ships.....	80,759	83,579	567,725
Tank-automotive.....	22,398	13,992	287,140
Weapons.....	18,423	15,625	150,418
Ammunition and explosives.....	46,558	31,085	270,856
Electronics and communication equipment.....	129,670	98,676	628,659
Fuels and lubricants.....	47,775	47,826	273,104
Clothing and equipage.....	16,004	10,652	257,954
Construction.....	159,403	105,380	915,152
Other.....	107,829	116,382	788,020
Totals.....	958,459	869,636	6,690,463

The ability of Canadian industry to produce a greater variety of defence items made it possible to place 96.5 p.c. of the value of defence contracts in this country in 1956 and 91.0 p.c. in 1957. This represents a significant achievement over earlier periods of the defence program when industry in Canada received a much smaller proportion of the defence contracts. Contracts placed abroad are for items that cannot be economically produced in Canada within the limits of current and anticipated defence requirements.

Aircraft.—The *F-86 Sabre* jet fighter program for the RCAF was completed in 1957, but production continued on a contract for the West German Air Force. In 1956, *Sabre* production had been reduced slightly from the level of 1955 though a reduction in deliveries to the RCAF was partly offset by company export sales to the Union of South Africa and to Colombia. The *CF-100* jet interceptor continued in production at a reduced rate throughout 1956 and 1957. A reduction in the quantity of *CF-100* aircraft delivered to the RCAF, and the termination of the *Mark-6* program in 1957, were more than offset by a United States Mutual Aid purchase of a large number of these aircraft for Belgium. The output of jet powered *T-33 Silver Star* training aircraft was maintained at a minimum level during these two years. The first deliveries of the *CS2F Tracker* aircraft to the Royal Canadian Navy took place in 1956 as scheduled and continued in production through 1957. This aircraft, powered by twin *R-1820-82* piston engines, is designed for the detection and destruction of submarines. Both airframe and engines are being built in this country to United States designs, and the work is being shared widely by Canadian industry through a broad sub-contracting program. During the two years under review, rapid strides were made in the development and production of the *CF-105* supersonic jet fighter, the first of which came off the line on schedule late in 1957. The speed and altitude capability demanded of this aircraft necessitate the highest standards in equipment and materials, and Canadian industry has had to develop special manufacturing techniques to meet this need. The first flight of the long-range maritime reconnaissance aircraft, the *CP-107 Argus*, was made in 1957. This craft is a re-design of the *Bristol Britannia* civil aircraft. A transport version of the *Argus*, designated the *CC-106*, was introduced for engineering and tooling during 1957; its engines and associated propellers are of British make.

In the aero engine field, activity paralleled that for airframes. Production of *Orenda* engines for the *Sabre* and *CF-100* aircraft continued at reduced rates. Development of the more powerful *PS-13 Iroquois* engine, to be fitted in the *CF-105*, proceeded satisfactorily and a prototype was air tested in 1957. In the Canadian piston engine facility, the production of *R-1340 Wasp* engines for the Mutual Aid Program was completed late in 1956, with the manufacture of long-term maintenance parts continuing throughout that year. During 1957 the production of *Wasp* engines was largely replaced by the production of *R-1820-82* engines for the *CS2F Tracker* aircraft. The manufacture of *43D51* propellers for the *Tracker* also proceeded satisfactorily.

The repair and overhaul of aircraft, aircraft engines, instruments, systems and accessories occupy a position of increasing importance. The repairs and overhaul needs of older items of equipment increase with the passage of time and, at the same time, the growing complexity and more stringent operational requirements of newer equipment impose new demands on the repair and overhaul facilities. These facilities were kept abreast of new developments, and relatively stable work loads were maintained through a system of progressive overhaul followed by the Department of National Defence.

Early in 1956, the *Sparrow II* missile, developed in the United States, was chosen to meet RCAF requirements for air-to-air guided missiles, superseding the Canadian weapon, *Velvet Glove*. As a result of this decision, work among the Canadian contractors employed on the *Velvet Glove* program was limited to the minimum needed to keep intact the engineering complex which had been developed and to maintain a nucleus of essential personnel. By the end of 1957, the bulk of the drawings, technical data, and other information relative to *Sparrow II* had been received from the United States, thus permitting certain activity among manufacturers of special equipment in Canada. This missile is to be modified for use in the *CF-105 Arrow* aircraft.

Electronics.—The procurement and production of electronic equipment for defence reached a peak in 1956. The completion of the Mid-Canada radar line, the postponement of production for the radar improvement program and the approaching completion of some existing production contracts together with a slow-down caused by the change-over from the *Velvet Glove* to the *Sparrow* missile caused a decline in 1957. This decline, however, was partially offset by activity on the development of the electronics system for the *CF-105*

aircraft, begun in mid-1956 and continued through 1957. Although this development is taking place in the United States, production of the system will be in Canada with the most practical degree of Canadian content. The electronics program for the *Sparrow* missile started early in 1957 and involved limited tooling and pre-production. Some missile fuze development work was also continued pending a decision on the production requirements for the *Sparrow* fuze; this is a specialist skill which has been built up in Canada since 1951. Delivery of the *CF-100* flight simulators, which began in 1956, continued throughout 1957.

The ultra high frequency (UHF) conversion program for the RCAF progressed, with ground-based equipment procurement nearing completion and on-site installation well under way by the end of 1957. A production program for modern multi-channel airborne UHF equipment was started. A contract for airborne radar equipment for the *CS2F* aircraft was completed by the end of 1957, leaving only support spares to be provided. Canadian industry, sponsored by a development contract, produced airborne doppler navigational equipment which is considered to be a forerunner in this field. The Mid-Canada radar line, a significant achievement of the defence program, was completed early in 1957 and is now an integral part of the North American defence network. The line, which was completely financed by Canada, lies between the joint Canadian-United States-financed Pinetree line to the south and the United States-financed Distant Early Warning (DEW) line to the north. In 1957, two civilian contractors were selected to be responsible for carrying out maintenance and to supply supporting services on the Mid-Canada line for the RCAF. Maintenance contracts, to provide back-up support for RCAF-manned Pinetree line stations, were in effect during this period.

Shipbuilding.—The light fleet carrier, *HMCS Bonaventure*, was commissioned on Jan. 17, 1957. The *Bonaventure* was built in Northern Ireland and is one of the most modern light fleet carriers afloat. It is equipped with an angled flight deck, mirror landing aids, steam catapult, and the latest electronic equipment. Three destroyer escorts were commissioned during each of the years 1956 and 1957. These are sister ships of *HMCS St. Laurent*, the lead ship of this Canadian design class which was completed in 1955. The lead ship of the second group of destroyer escorts, *HMCS Restigouche*, was also scheduled for commissioning in 1957 but was damaged in a collision during sea trials. Work continued on the other six ships of the second group. During 1957, authority was granted for the construction of two additional destroyer escorts and for the procurement of long lead components for four ships.

The first of six MCB-class coastal minesweepers was commissioned late in 1956 and the other five were commissioned in 1957. These ships, an advanced version of the earlier AMC-class, were designed in Canada to cope with the latest developments in mines. The second program for modernizing World War II frigates was nearly completed, with four of the five ships commissioned by the end of 1957. Various auxiliary craft were produced, including 150-foot sea-going tugs, steel crane lighters, inner patrol vessels, clearance diving vessels, power barges, and ammunition lighters. Fifty-two small boats were completed in 1956 and 40 in 1957, varying in size from 27-foot motor sea boats to 14-foot dinghies. Delivery of a later type United States torpedo manufactured in Canada began in 1957.

Weapons and Ammunition.—During 1956, final deliveries were made to the Canadian Army of the first order for 105mm howitzers, and a second order was placed with deliveries to begin in 1958. The delivery of 155mm howitzers to the Army was completed during 1957. A combined order for 105 and 155mm lifetime spares was placed during 1957 and deliveries will run concurrently with the main equipment. This action will eliminate the high costs involved in start-and-stop manufacture of small quantities of components. The production for the Army of rocket launchers and associated range finder sights was completed. In the small arms category, Canadian Arsenals Limited began delivery of the new 7.62mm C-1 (FN) rifle in October 1956. A 7.62mm light machine

gun was approved in 1957 and production will run concurrently with the rifle. Early in that year, a contract was placed in Canada for a British sub-machine gun adopted by Canada.

The production of ammunition generally declined in both 1956 and 1957. However, ammunition production for the 7.62mm rifle was increased to permit general issue. A propellant for this ammunition, which has met NATO standards, was developed by Canadian Arsenals Limited, extending the storage life of the ammunition. Production continued on other types of small arms ammunition: .30, .303, 9mm, 20mm, and numerous pyrotechnics and explosive stores for the three Services; 40mm, 3"50, 4", and anti-submarine devices for the Navy; 2", 60mm, 81mm mortar and 105mm howitzers for the Army; 2.75" air-to-air rockets and marine markers for the RCAF. Canadian production of Army mines, fuze 410, certain anti-submarine projectiles, double-base rocket propellant grains, echo ranging bombs, and certain pyrotechnics occurred for the first time. A production program for 20-pdr. tank ammunition, incorporating three years of pre-production work on improvement, got under way.

Construction.—Defence construction activity in 1956 was exceeded only in 1952, mainly as a result of work on the Mid-Canada radar line and the Army home station development program. The completion of the Mid-Canada project and reduced work required for the home station development program caused a significant drop in defence construction in 1957. The Mid-Canada line was the largest single project undertaken by Defence Construction (1951) Limited on behalf of the Department of National Defence, and construction of Camp Gagetown, N.B., one of the seven home stations, was the largest project undertaken on a single site. The other home stations under construction were at Valcartier, Que., London and Petawawa, Ont., Winnipeg, Man., and Edmonton and Calgary (Camp Sarcee), Alta.

General Purchasing.—The general purchasing program is primarily concerned with the clothing, equipping, feeding, maintaining and servicing of the Canadian Armed Forces, and the purchase of certain supplies for the Defence Research Board and the Inspection Services of the Department of National Defence. These general purchases of supplies and services not normally requiring special production facilities include such items as: textiles and all types of clothing, footwear and leather goods, transport equipment (military and commercial) together with parts and replacements, the repair and reconditioning of all types of service vehicles, food and catering services, furniture and furnishings, petroleum products and hard fuels, medical and dental stores, aerial surveys, building supplies, and all types of barrack stores. Some of the major contracts placed during 1956 and 1957 were for electrical aircraft spares for *F-86 Sabre* aircraft, shipboard cable for the destroyer-escort program and for normal maintenance needs, certain requirements for the Mid-Canada project, fuel for aircraft, equipment for winter maintenance of airdromes, refueling and crash fire trucks for the RCAF, maintenance equipment for the Air Division in Europe, and a number of aerial surveys.

The fourteen district offices maintained by the Department of Defence Production across Canada continued to purchase food and other defence supplies and services of a local or urgent nature needed by defence establishments in the vicinity of such offices. Other purchases included hardware and building materials, electrical and electronic equipment, petroleum products, furniture, and barrack stores. Service contracts were arranged for minor repairs to ships, minor alterations and repairs to buildings, laundry and dry cleaning, coal hauling, disposal of ashes and refuse, snow removal, transportation, consulting engineering services, and repairs to footwear and clothing.

PART III.—CIVIL DEFENCE

The continuing threat of armed aggression, coupled with the increasing power of thermo-nuclear weapons, has forced upon Canada a constant development of new civil defence techniques and training methods. Civil defence planning is integrated with the over-all plan for national defence with the aim of survival in the event of direct attack. A further role is the provision of aid to the civil powers in times of natural disaster.

In October 1948, the Minister of National Defence appointed a Co-ordinator for Civil Defence whose duty it is to plan for civil defence. Assisting in this program are the Federal Civil Defence Planning Committee, an Interdepartmental Committee and a Federal-Provincial Advisory Committee composed of the federal Minister responsible for civil defence, as chairman, and the provincial Ministers responsible for civil defence within the provinces.

Since February 1951, when the administration of civil defence was transferred to the Department of National Health and Welfare, the Minister of that Department has been charged with the responsibility in matters of federal policy. After study of organizations in the United Kingdom, the United States and NATO countries, a plan for national survival was established, based on the evacuation of probable urban target areas. The Minister of National Health and Welfare announced the plan as government policy in the House of Commons on July 28, 1956, when he stated, "Our civil defence policy should now be based on the development and testing of plans for the orderly evacuation on short notice of the main target areas in Canada should the possibility of attack on such areas by nuclear weapons appear to be imminent".

On the basis of population density and industrial potential, Canada's probable target areas are: Victoria, Vancouver, Edmonton, Winnipeg, Windsor, Hamilton, Niagara Falls, Toronto, Ottawa-Hull, Montreal, Quebec City, Saint John and Halifax.

Canadian civil defence is organized at all levels of government—federal, provincial and municipal—each with its own sphere of responsibility. The provinces are self-contained units and are subdivided into areas or regions for the purpose of providing mutual support to any disaster region. Because of geographical location in relation to target centres, certain areas have been designated as mutual aid or reception areas. Administrative and organization responsibilities for each are: federal—planning, policy and financial assistance; provincial—organization and implementation; municipal—execution of plans and policy.

A Federal Civil Defence Headquarters is established in Ottawa and comprises the Civil Defence Co-ordinator and staff plus the following Services: Planning and Operations, Training and Education, Health, Welfare, Information, Communications and Transportation. Certain other government agencies are also involved, such as the Royal Canadian Mounted Police, the Armed Services, the Departments of Agriculture and Transport, and the Defence Research Board.

Through direct liaison with the RCAF an early warning system has been established. In 1957, high-power sirens supplied by the Federal Government were installed and tested in vulnerable target areas. An extensive health supply stockpiling program was completed with the co-operation of the Departments of National Defence and Veterans Affairs.

Civil defence training courses, begun in 1951, have been continually expanded. More than 9,000 persons from across Canada have attended courses at the Canadian Civil Defence College at Arnprior, Ont., since its establishment in 1954. Thirteen basic courses are available dealing with such subjects as: health, welfare, communications, transportation, staff duties, casualty simulation, rescue, and radiation detection. In addition, special forums have been held for groups representing the press, clergy, mayors, police, fire fighters, national organizations such as the Canadian Red Cross Society, and industrial groups. Training is conducted under provincial auspices with British Columbia, Alberta, Saskatchewan and New Brunswick operating civil defence schools. On Mar. 31, 1957, the total enrolment of civil defence workers was 224,146.

Under the Financial Assistance Program of the Federal Government each province is provided with a money quota based on population and vulnerability; 50 p.c. of the cost of an approved project is contributed by the Federal Government and the remainder shared between the municipality and the province. A minimum of 25 p.c. is contributed direct to a municipality for projects in which the provincial government does not share in the cost. Training aids, fire and rescue equipment, and educational material continue to be supplied by Federal Headquarters to further provincial and municipal programs.

A fire-hose coupling standardization program, to which the Federal Government contributed one-third of the cost, has been completed in British Columbia, Alberta and Ontario. Payments for workmen's compensation for civil defence workers are shared by agreement on an equal basis between the Federal Government and all provinces except Quebec, Nova Scotia and Prince Edward Island.

Many technical and training manuals, booklets and brochures have been produced by Federal Civil Defence Headquarters. In addition, pamphlets, folders, training aids, films, slides, newsclips and radio, newspaper and television material have been produced and distributed as part of the continuing public information program. The first National Civil Defence Day in Canada held on Friday, Oct. 4, 1957, was primarily designed to further acquaint the citizens of the country with the aims, organization and planning for civil defence. Provincial and municipal organizations from coast to coast took part. Over 2,000,000 pieces of informational material and literature were distributed by Federal Headquarters in this national and co-operative program.

Civil defence development and problems are constantly under discussion and study with the United States, the United Kingdom and other NATO countries. As the result of an agreement made between Canada and the United States in 1951, a United States-Canada Civil Defence Committee meets at regular intervals to further the bond of mutual assistance in the event of enemy attack.

CHAPTER XXIX.—SOURCES OF OFFICIAL INFORMATION AND MISCELLANEOUS DATA

CONSPECTUS

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PART I.—SOURCES OF OFFICIAL INFORMATION

Section 1.—Federal Government Information Services

The chief source of statistical information on all phases of the economy of Canada is the Dominion Bureau of Statistics where the ten-year and five-year censuses of Canada are planned and statistical information of all kinds—federal and provincial—is centralized. Information that is not mainly statistical may be secured from the individual Department concerned with the particular subject as indicated in the Directory at pp. 1217-1246. Certain government bodies and national agencies, because of the nature of their work and the appeal it has to broad sections of the population, are organized primarily as information or publicity agencies. Among these are: the Information Division, Department of External Affairs, which deals with questions about external affairs originating in Canada and with general requests originating abroad for information on Canada and Canadian affairs; the Trade Publicity Branch, Department of Trade and Commerce; the Information Services Division, Department of National Health and Welfare; the Canadian Broadcasting Corporation; and the National Film Board. (*See Index.*) The Departments of Agriculture, Northern Affairs and National Resources, and Mines and Technical Surveys, and such agencies as the National Gallery of Canada, the National Museum of Canada, the National Library, and the National Research Council, while not thus classed, are interested in the dissemination of information to a greater extent than most of the remaining government departments, though several of the latter have publicity branches or public relations divisions.

Government departments, with few exceptions, issue their own lists of reports and publications. Departments are required by statute to publish annual reports, which are tabled each year in the House of Commons by their respective Ministers. However, for the purpose of this Section, only the services of the six information agencies mentioned above are described.

Section 2 has been prepared for the purpose of presenting to the reader a directory of all sources of information, federal and provincial, thereby directing him to the proper channels from which he may draw published material relating to any particular subject.

The Dominion Bureau of Statistics.—The Dominion Bureau of Statistics was set up by statute in 1918 as a central statistical department for Canada (8-9 Geo. V, c. 43). In 1948 this statute, which had been consolidated as the Statistics Act (R.S.C. 1927, c. 190), was repealed and replaced by the Statistics Act (R.S.C. 1952, c. 257), subsequently amended in March 1953 (1-2 Elizabeth II, c. 18).

The chief aims of the Dominion Bureau of Statistics are: (1) to furnish statistical data bearing on Canada for government and administration, whether municipal, provincial, national or international; and (2) to assist in meeting the needs of non-governmental users of statistics, arising from a growing awareness of the value of statistics to business efficiency and social planning.

Inquiries.—Hundreds of individual requests for information are received in the Information Services Division of the Bureau each day, routed through the appropriate divisions and answered as expeditiously as possible. Since the field of effort from the statistical side deals with all phases of the national economy, there is scarcely a subject upon which the Bureau is not able to give some information. Nevertheless only inquiries of a statistical nature should be directed to the Dominion Bureau of Statistics.

Publications.—The Dominion Bureau of Statistics is the principal publication agency of the Federal Government; the subjects of its statistical reports cover all aspects of the national economy, and its *Canada Year Book* and *Official Handbook Canada* constitute authoritative compendiums of information on the institutions and economic and social development of Canada.

Dominion Bureau of Statistics publications are listed in its catalogue of *Current Publications* and in the Queen's Printer's *Catalogue of Canadian Government Publications*. The DBS *Daily Bulletin* and *Weekly Bulletin*, available from the Bureau's Information Services Division at an annual subscription of \$1.00 each, are designed to serve persons wishing to keep closely informed on the full range of published information issued by the Bureau. Subscription orders for DBS publications or orders for single copies should be addressed to the Information Services Division, Dominion Bureau of Statistics, Ottawa, and should contain the necessary remittance in the form of a cheque or money order made payable to the Receiver General of Canada.

Information Division, Department of External Affairs.—The Information Division has two functions: to promote within Canada interest in and knowledge of international affairs, and to make Canada and Canadian policies better known and understood abroad.

To perform the first function the Division produces and distributes various documents on external affairs—statements of government policy and reports on related developments abroad and on the work of the Department generally. The Division also answers inquiries from Canadian sources on these subjects (except for inquiries from the press which are handled by the Department's Press Office) as well as requests for information about Canada made by Diplomatic Missions at Ottawa, by Canadian posts abroad, and by individuals and organizations in other countries.

Most of the information work abroad is done, however, by officials at Canadian posts. The Information Division assists by formulating and advising on information policy abroad in an effort to ensure that this policy is related to the general objectives of Canadian foreign policy, and by producing and procuring material to keep Missions informed of developments within Canada. Journalists and others who visit Canada to write of Canadian affairs are given assistance from time to time by the Division; its responsibilities also include the co-ordination of the Government's activities in the field of cultural relations.

Trade Publicity Branch, Department of Trade and Commerce.—For details see p. 1062.

Information Services Division, Department of National Health and Welfare.—

The responsibility of this Division, in co-operation with other divisions of the Department of National Health and Welfare and provincial authorities, is the production and distribution of educational material on health, welfare, social security and civil defence, for use throughout the country. This information, issued in the English and French languages, includes books, pamphlets, periodicals, posters, exhibits, displays, radio dramatizations, press and magazine features and releases, as well as films and film-strips prepared in co-operation with the National Film Board. Books, pamphlets, posters and displays are distributed in Canada through provincial authorities. The most important periodicals published by the Division are *Canada's Health and Welfare* (monthly), *Canadian Nutrition Notes* (monthly), *Occupational Health Bulletin* (monthly), *Industrial Health Review* (semi-annually) and *Nutrition Bulletin* (annually).

Canadian Broadcasting Corporation.—Television and radio broadcasting are important mediums of information to the public along with newspapers, films and other means of communication. Broadcasting in Canada combines, in one national system, publicly owned stations and privately owned local community stations, many of which are affiliated with the Canadian Broadcasting Corporation's networks.

Since its establishment in 1936 the Canadian Broadcasting Corporation has become one of the most effective channels through which information, official and unofficial, is broadcast to the people of Canada. Radio is relatively more important in Canada than in most countries because of the widely distributed population and the number of sparsely peopled areas, and the CBC has gradually bridged the gaps with high-powered transmitters designed to serve rural as well as urban areas. The CBC has also pioneered in the development of low-powered repeater stations attached to the network lines, which serve areas unable, because of topographical conditions, to receive an adequate signal from any existing station.

News broadcasts and information programs occupy a considerable proportion of national and regional network time. All CBC schedules include news, music, drama, informative talks, children's programs, school broadcasts, public service broadcasts, sports, women's activities, etc. There is a very wide range of radio and television fare, since the CBC not only produces its own programs in the various production centres across Canada but brings in selected programs from the networks of the United States, the British Broadcasting Corporation and other national radio and television systems. The CBC maintains a bureau at London, England, and at United Nations Headquarters in New York, and is credited with having done more to inform listeners of United Nations activities than any other broadcasting system.

Through the International Service operated by the CBC on behalf of the Canadian Government, programs are broadcast over shortwave in 16 languages: English, French, German, Dutch, Danish, Norwegian, Swedish, Italian, Spanish, Portuguese, Czech, Slovak, Russian, Ukrainian, Polish and Hungarian. The CBC International Service broadcasts information abroad on life and economic conditions in Canada as part of the general information plan for promoting a better understanding of Canada in other countries. In addition to this regular shortwave program service, the International Service provides special programs for transmission by broadcasting systems in other countries by means of shortwave relays or recordings on tape or disc. A library of musical and spoken-word programs is made available to foreign broadcasting systems through processed transcriptions for wide distribution.

National Film Board.—The National Film Board produces films, film-strips and still photographs on a great variety of subjects. In keeping with its terms of reference, the Board's products are both informative and interpretative and are widely distributed, theatrically and non-theatrically. (See also Educational and Cultural Functions of the National Film Board, pp. 365-366.)

As a service to government departments, the Board maintains a preview library of 5,000 prints from many sources; 500 film-strips are also catalogued. Special libraries of films on such subjects as health, sociology, medicine and industry have also been established for the use of the government departments concerned and for special interest groups.

Films and film-strips produced by the National Film Board are shown in Canada and abroad. In Canada, the films are shown through the television network, through neighbourhood theatres and through the widespread network of community film libraries. In most communities voluntary organizations, called film councils, arrange the local facilities for use of films by community groups. Abroad, more than 29,000 prints are circulated to the Departments of External Affairs and of Trade and Commerce through the Board's offices in New York and Chicago in the United States, New Delhi, India, and London, England. In several countries distribution of the Board's films are handled by commercial and other loan agencies.

The Board's library of approximately 100,000 still photographs serves government departments, commercial photographers, newspapers, periodicals and many other organizations in Canada and abroad.

Section 2.—Directory of Sources of Official Information (Federal and Provincial)

To make the best use of the Directory of Sources of Government Official Information, it is necessary that the reader understand the broad differences in function between federal and provincial departments and their separate fields of work.

Certain fields of effort, such as trade and commerce, customs and excise, currency and banking, navigation, transportation, radio, census of population and national defence are constitutionally federal affairs and in such fields the respective Departments at Ottawa are the proper sources with which to communicate. Other fields of effort such as the administration of lands and natural resources, education, roads and highways, and health and hospitals are the responsibility of the provinces but certain Federal Departments are also concerned with specific aspects of these subjects and, as is the case of the Dominion Bureau of Statistics, in the co-ordination and presentation of the material for Canada as a whole.

As a general guide to the public, it may be pointed out that questions relating to the actual development and administration of resources should be forwarded to the particular provinces concerned. The Government of Canada, while not administering the resources within provincial boundaries, co-operates closely with the provinces and is in a position to furnish material for Canada, especially production data on a national basis, marketing data on international, national and provincial bases, research work and experimental station data on a national basis, and also on a provincial basis from Federal Government stations located within particular provinces. In agriculture, for instance, data on the breeding of livestock and the improvement of strains, on agricultural marketing and on crop yields are cases in point; in forestry, questions of forest research, forest fire protection and reforestation offer good examples. Inquiries directed to federal sources for information not of a statistical nature should as a general rule be sent to the individual Departments listed in the Directory; inquiries for information of a statistical nature should be addressed to the Information Services Division, Dominion Bureau of Statistics, Ottawa.

Sale of Official Publications.—Under the provisions of the Public Printing and Stationery Act, the Queen's Printer and Controller of Stationery, Ottawa, has charge of the sale of all official publications of Parliament and the Government of Canada that are issued to the public, as well as of the free distribution of all public documents and papers to persons and institutions (libraries) entitled by statutory provisions to receive them. The Dominion Bureau of Statistics acts as the agent of the Queen's Printer with respect to the sale of DBS publications.

The regulations relating to the distribution and sale of government publications made in accordance with the provisions of Sect. 7 of the Public Printing and Stationery Act and Sect. 7 (e) of the Financial Administration Act were brought up to date and approved by Treasury Board on Mar. 31, 1955.

In compliance with these regulations, the Queen's Printer and Controller of Stationery issues the *Daily Checklist of Government Publications* which records for the information of the public service, libraries, etc., all Federal Government publications immediately upon release. Those authorized by law or regulation to receive free copies of government publications receive the *Daily Checklist* without charge; others desiring the service may purchase an annual subscription to be forwarded daily or in weekly batches as requested.

The Queen's Printer and Controller of Stationery also issues the *Monthly Catalogue of Canadian Government Publications*, a comprehensive listing of all official publications, public documents and papers not of a confidential nature published at government expense, an *Annual Catalogue* (in January) listing all publications issued during the previous year, as well as sectional catalogues and selected titles bulletins advertising new government publications.

Most provincial government publications may be obtained from the Queen's Printer of the province concerned. Inquiries should be addressed to the provincial capital cities:—

Newfoundland.....	St. John's	Ontario.....	Toronto
Prince Edward Island....	Charlottetown	Manitoba.....	Winnipeg
Nova Scotia.....	Halifax	Saskatchewan.....	Regina
New Brunswick.....	Fredericton	Alberta.....	Edmonton
Quebec.....	Quebec	British Columbia.....	Victoria

Inquiries about the Yukon and Northwest Territories should be addressed to the Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, Ottawa.

(Detailed Directory of Sources of Official Information follows, pp. 1217-1246.)

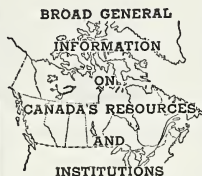
DIRECTORY OF SOURCES OF OFFICIAL INFORMATION

Sources for Federal Data

Subject

Sources for Provincial Data

Dept. of Trade and Commerce
Trade Publicity Branch
Dept. of Mines and Technical Surveys
Editorial and Information Division (for mineral resources)
Dept. of National Health and Welfare
Information Services
Dept. of Northern Affairs and National Resources
Editorial and Information Division
Dept. of External Affairs
Information Division (general requests originating in all countries outside Canada)
Dept. of Citizenship and Immigration
Editorial and Information Division
Dept. of Fisheries, Information and Educational Service
Dept. of Transport
Information Bureau
National Film Board (films, filmstrips, photographs on all subjects)
National Research Council
Public Relations Branch
Dominion Bureau of Statistics



For broad general information in regard to particular provinces application should be made to: Nfld., Dept. of Provincial Affairs; P.E.I., Tourist and Information Bureau; N.S., Dept. of Trade and Industry; N.B., Dept. of Industry and Development or Dept. of Provincial Secretary-Treasurer or N.B. Travel Bureau; Que., Bureau of Statistics; Ont., Bureau of Statistics and Research or Dept. of Travel and Publicity; Man., Dept. of Industry and Commerce and Dept. of Provincial Secretary; Sask., Dept. of Travel and Information, or Executive Council, Industrial Development Office, or Economic Advisory and Planning Board; Alta., Publicity Bureau, Dept. of Economic Affairs; B.C., Depts. of Industrial Development and Trade and Commerce, Bureau of Economics and Statistics.

Dept. of Agriculture
Information Service
Experimental Farms Service
Dept. of Trade and Commerce
Agriculture and Fisheries Branch
Dept. of Northern Affairs and National Resources (Yukon and Northwest Territories)
Dept. of Citizenship and Immigration
Immigration Branch
Indian Affairs Branch
Dept. of Labour (farm workers)
Dept. of Veterans Affairs
Dept. of Finance (farm improvement loans)
Canadian Farm Loan Board (long-term mortgage loans)
Central Mortgage and Housing Corporation (long-term mortgage loans for new farm houses)
National Film Board (films, photographs)
Dominion Bureau of Statistics

AGRICULTURE General and Farming

Nfld.:—Dept. of Mines and Resources
P.E.I., N.S., N.B., Sask.:—Depts. of Agriculture
Que.:—Dept. of Agriculture, Information and Research Branch
Dept. of Trade and Commerce
Bureau of Statistics
Ont.:—Dept. of Agriculture, Statistics and Publication Branch
Man.:—Dept. of Agriculture and Immigration, Publications Branch and Extension Service
Alta.:—Dept. of Agriculture
B.C.:—Dept. of Agriculture, Dept. of Industrial Development, Trade and Commerce, Bureau of Economics and Statistics
Dominion Bureau of Statistics (summaries of provincial data)

Dept. of Citizenship and Immigration
Indian Affairs Branch
Dept. of Mines and Technical Surveys
Editorial and Information Division
Geological Survey of Canada
Surveys and Mapping Branch
Geographical Branch
Dept. of National Defence
Director of Public Relations
Defence Research Board
Dept. of National Health and Welfare (health services)
National Research Council
Division of Building Research (permafrost, buildings in the north, snow and ice)
Dept. of Northern Affairs and National Resources
Editorial and Information Division
Arctic Division
Dept. of Transport (Arctic navigation)
Fisheries Research Board of Canada
National Film Board (films, filmstrips and photographs)

ARCTIC

Sask.:—Dept. of Natural Resources, Northern Administration District

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Mines and Technical Surveys Dominion Astrophysical Observatory, Victoria, B.C. Dominion Observatory, Ottawa, Ont. National Research Council Radio and Electrical Engineering Division (radio astronomy)	ASTRONOMY	Que.:—Office of Provincial Secretary Quebec Society of Astronomy Sask.:—University of Saskatchewan, Saskatoon Alta.:—University of Alberta, Edmonton
Atomic Energy Control Board (policy, regulations) Atomic Energy of Canada Limited (research studies, sale of radio-isotopes) Dept. of Mines and Technical Surveys Geological Survey of Canada Mines Branch Eldorado Mining and Refining Limited	ATOMIC ENERGY	Sask.:—University of Saskatchewan, Saskatoon Alta.:—Alberta Research Council, University of Alberta Campus, Edmonton
Dept. of Transport Civil Aviation Branch (controls, licences and facilities, such as radio aids and licences) Air Transport Board (licensing of commercial air services and the economic regulation of such air services) Bureau of Transportation Economics Trans-Canada Air Lines Dept. of National Defence Directorate of Public Relations (RCAF) Dept. of National Health and Welfare Civil Aviation Medicine Division Dept. of Defence Production Aircraft Branch Dept. of Mines and Technical Surveys Legal Surveys and Aeronautical Charts Division National Film Board (films and photographs) National Research Council Division of Mechanical Engineering (aeronautical research) Dominion Bureau of Statistics	AVIATION	Ont.:—Dept. of Lands and Forests, Air Service Man.:—Manitoba Government Air Services Sask.:—Saskatchewan Government Airways
Bank of Canada Industrial Development Bank Dept. of Finance Dept. of Insurance (for trust and loan business, administers also the Small Loans Act) Central Mortgage and Housing Corporation Post Office Department, Savings Branch Dominion Bureau of Statistics	BANKING Trust and Loan Companies	Nfld.:—Dept. of Finance Supreme Court Registry of Deeds P.E.I., N.S., Man.:—Dept. of Provincial Secretary N.B.:—Dept. of Provincial Secretary-Treasurer Que.:—Dept. of Finance, Insurance Branch Dept. of Trade and Commerce Bureau of Statistics Ont.:—Province of Ontario Savings Office Attorney-General, Dept. of Insurance Sask.:—Provincial Secretary, Registrar of Securities Dept. of Co-operation and Co-operative Development, Credit Union Services Alta.:—Government of Alberta Treasury Branches B.C.:—Dept. of Finance, Inspector of Trust Companies
Dept. of Justice Superintendent of Bankruptcy Dominion Bureau of Statistics	BANKRUPTCY	Man.:—Dept. of Provincial Secretary Sask.:—Provincial Secretary

Sources for Federal Data

Subject

Sources for Provincial Data

National Library (information re books in libraries of federal departments and other Canadian libraries; information on current Canadian publications)
 Department of Public Printing and Stationery (information re prices, availability or otherwise, of all publications not confidential in nature, issued by Parliament and the various departments and agencies of the Government of Canada)
 Dominion Bureau of Statistics, Information Services Division (for statistical publications)

**BIBLIOGRAPHY:
BOOKS**

Nfld.:—Dept. of Education
 Public Libraries Board
 P.E.I.:—Dept. of Education
 Superintendent of Libraries and Director of Adult Education
 N.S.:—Dept. of Education
 N.B., Man.:—Dept. of Education
 Provincial Librarian
 Que.:—Office of Provincial Secretary
 Provincial Archives
 Provincial Library
 Ont.:—Dept. of Education
 Director of Public Library Service
 Sask.:—Provincial Library
 Legislative Library
 Alta.:—Dept. of Economic Affairs
 Library Board
 Provincial Library and Archives
 B.C.:—Dept. of Education
 Provincial Library and Archives
 Public Library Commission.

BIRTHS
 See "Vital Statistics"

Dept. of National Health and Welfare
 Dept. of Northern Affairs and National Resources (Yukon and Northwest Territories)

**BLINDNESS
ALLOWANCES**

Sources same as for "Old Age Assistance" excepting:
 P.E.I.:—Director of Blind Persons Allowances

BROADCASTING
 See "Radio"

Dept. of Public Works
 Building Construction Branch
 Chief Architect and Information Services
 Dept. of Northern Affairs and National Resources (water resources of Yukon and Northwest Territories)
 Central Mortgage and Housing Corporation (National Housing Act financing, building standards, house designs)
 National Research Council, Division of Building Research (materials of construction, building codes, building practice, soil and snow mechanics)
 Dept. of National Health and Welfare
 Hospital Design Division
 Dept. of Defence Production
 Defence Construction (1951) Limited
 Canadian Farm Loan Board
 Canadian Government Specifications Board
 Canadian Standards Association
 Dept. of Finance (Farm Improvement Loans Act)
 Dept. of Veterans Affairs (Soldier Settlement and Veterans' Land Act)
 Dominion Bureau of Statistics

**BUILDING
CONSTRUCTION**

Nfld., N.B.:—Dept. of Public Works
 P.E.I.:—Dept. of Industry and Natural Resources
 Que.:—Farm Credit Bureau
 Family Housing Division
 Dept. of Trade and Commerce, Bureau of Statistics
 Ont.:—Dept. of Labour
 Factory Inspection Branch
 Dept. of Planning and Development
 Community Planning Branch
 Man., Sask.:—Dept. of Labour
 Alta.:—Dept. of Industries and Labour
 Provincial Bureau of Statistics
 B.C.:—Dept. of Finance, Housing Commissioner
 Dept. of Labour, Factory Inspection Branch
 Dept. of Industrial Development
 Trade and Commerce
 Bureau of Economics and Statistics

<u>Sources for Federal Data</u>	<u>Subject</u>	<u>Sources for Provincial Data</u>
Dept. of Transport Canal Services National Research Council Division of Mechanical Engineering (St. Lawrence Seaway Models) Dominion Bureau of Statistics	CANALS	
Dept. of Trade and Commerce Commodities Branch Dominion Bureau of Statistics	CHEMICALS	
Dept. of Citizenship and Immigration Canadian Citizenship Branch Canadian Citizenship Registration Branch National Film Board (films, filmstrips, photographs)	CITIZENSHIP <i>See also</i> "Population"	
	CIVIL AVIATION <i>See "Aviation"</i>	
Dept. of National Health and Welfare Civil Defence Division	CIVIL DEFENCE	Nfld.:—Dept. of Provincial Affairs P.E.I., Man.:—Office of the Premier N.S.:—Dept. of Provincial Secretary N.B., Alta.:—Depts. of Municipal Affairs Que.:—Dept. of Social Welfare and Youth Ont.:—Dept. of Planning and Development, Civil Defence Branch Sask.:—Dept. of Social Welfare, Director of Civil Defence B.C.:—Dept. of Provincial Secretary, Provincial Co-ordinator
Dept. of Transport Meteorological Branch, Toronto National Research Council Division of Building Research, (Climatological Atlas of Canada, National Building Code)	CLIMATE	Que.:—Dept. of Lands and Forests Meteorological Bureau Dept. of Trade and Commerce, Bureau of Statistics B.C.:—Dept. of Agriculture
Dept. of Mines and Technical Surveys Geological Survey of Canada Mines Branch Dominion Coal Board Dominion Bureau of Statistics	COAL	N.S., Que., Ont., B.C.:—Depts. of Mines N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Mines Branch Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals
Dept. of Justice Director of Investigation and Research Restrictive Trade Practices Commission	COMBINES	

Sources for Federal Data

Subject

Sources for Provincial Data

Dept. of Northern Affairs and
National Resources
Northern Administration and
Lands Branch (wireless com-
munication in the Yukon and
Northwest Territories)
National Parks Branch (telephones
in National Parks)
Board of Transport Commissioners
(regulation of certain telegraph
and telephone companies)
Dept. of Transport
Telecommunication Branch—
radio communications; aviation
radio and marine radio; Govern-
ment telegraph and telephone
services (telegraph and telephone
services in remote areas)
Canadian Overseas Telecommunica-
tion Corporation
Canadian Broadcasting Corporation
(network broadcasting, televi-
sion, and international short-
wave service)
Dept. of Trade and Commerce
Transportation and Trade Services
Division
Dominion Bureau of Statistics

COM-
MUNICATIONS
For Post Office
and Mail
see "Post Office"

Nfld.:—Dept. of Economic Develop-
ment
P.E.I.:—Tourist and Information
Bureau
N.B.:—Travel Bureau
Que.:—Public Service Board
Transportation Board
Ont.:—Municipal Board and Bureau
of Statistics and Research
Man.:—Manitoba Telephone System
Sask.:—Dept. of Telephones
Saskatchewan Government Tele-
phones
Alta.:—Dept. of Railways and Tele-
phones
B.C.:—Dept. of Railways
RCMP Provincial Headquarters

Dept. of National Health and
Welfare (social, welfare and
recreation)
Central Mortgage and Housing
Corporation
Federal District Commission
Information Division (general in-
formation on the Plan for the
National Capital of Canada)
National Film Board (films, photo-
graphs)

COMMUNITY
PLANNING

Nfld.:—Dept. of Municipal Affairs
and Supply
P.E.I.:—Dept. of Industry and
Natural Resources
Dept. of Education, Physical
Fitness Division
N.S.:—Dept. of Municipal Affairs
Dept. of Education, Physical
Fitness Division
N.B.:—Dept. of Education, Physical
Education and Recreational
Branch
Que., Sask.:—Depts. of Municipal
Affairs
Ont.:—Dept. of Planning and De-
velopment, Community Planning
Branch
Dept. of Education, Community
Programs Branch
Man.:—Depts. of Municipal Com-
missioner and Mines and Natural
Resources, Surveys Branch
Dept. of Health and Public
Welfare, Physical Fitness and
Recreation Division
Sask.:—Dept. of Municipal Affairs,
Community Planning Branch
Executive Council, Economic Ad-
visory and Planning Board
Alta.:—Dept. of Municipal Affairs,
Town and Rural Planning
Branch
B.C.:—Dept. of Industrial Develop-
ment, Trade and Commerce,
Bureau of Economics and Sta-
tistics
Dept. of Municipal Affairs
Regional Planning Division
Dept. of Education, Community
Programs Branch
Lower Mainland Regional Plan-
ning Board

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Northern Affairs and National Resources National Parks Branch, Canadian Wildlife Service Northern Administration and Lands Branch Forestry Branch Federal District Commission Dept. of Agriculture Experimental Farms Service Economics Division Prairie Farm Rehabilitation Administration Maritime Marshlands Rehabilitation Administration Dept. of Fisheries Information and Educational Service National Film Board (films, photographs)	CONSERVATION	Nfld.:—Dept. of Mines and Resources P.E.I.:—Dept. of Industry and Natural Resources N.S., Alta.:—Depts. of Lands and Forests N.B.:—Dept. of Lands and Mines Que.:—Dept. of Lands and Forests Dept. of Game and Fisheries Dept. of Hydraulic Resources Ont.:—Dept. of Lands and Forests Dept. of Planning and Development, Conservation Branch Ontario Agricultural College, Guelph Man.:—Dept. of Mines and Natural Resources Sask.:—Dept. of Natural Resources Dept. of Agriculture, Conservation and Development Branch B.C.:—Dept. of Lands and Forests, Director of Conservation, Dept. of Recreation and Conservation
Privy Council Office Dept. of Secretary of State Dept. of Justice Public Archives	CONSTITUTION	All Provinces except B.C.:—Depts. of Attorney General B.C.:—Provincial Secretary
Dominion Bureau of Statistics	CONSUMER PRICE INDEX <i>See also</i> "Cost of Living"	
Dept. of Agriculture Economics Division Dept. of Fisheries Information and Educational Service Dept. of Insurance Central Mortgage and Housing Corporation (mortgage-lending activities) Dept. of Secretary of State Companies Division	CO-OPERATIVES (including Credit Unions)	Nfld.:—Dept. of Fisheries and Co-operatives P.E.I.:—Dept. of Agriculture N.S.:—Dept. of Provincial Secretary N.B.:—Dept. of Agriculture Que.:—Dept. of Agriculture Dept. of Trade and Commerce Bureau of Statistics Ont.:—Dept. of Agriculture Co-operation and Markets Branch Dept. of Provincial Secretary Dept. of Insurance Man.:—Dept. of Agriculture and Immigration, Co-operative Services Branch Sask.:—Dept. of Co-operation and Co-operative Development Alta.:—Dept. of Industries and Labour B.C.:—Attorney-General's Dept., Registrar of Companies
Dominion Bureau of Statistics (wholesale and retail prices and consumer price index)	COST OF LIVING	Nfld.:—Dept. of Municipal Affairs and Supply Sask.:—Dept. of Labour Alta.:—Dept. of Industries and Labour Provincial Bureau of Statistics B.C.:—Dept. of Industrial Development, Trade and Commerce Bureau of Economics and Statistics

Sources for Federal Data

Subject

Sources for Provincial Data

Canada Council
 Dept. of Northern Affairs and
 National Resources
 Northern Administration and
 Lands Branch
 National Parks Branch
 National Museum of Canada
 Dept. of Citizenship and Immigration
 Indian Affairs Branch (Indian
 handicrafts)
 Dept. of Trade and Commerce
 Commodities Branch
 Dept. of National Health and
 Welfare
 Dept. of Veterans Affairs (veterans
 only)
 National Gallery of Canada (films,
 reference library)
 National Film Board (films, film-
 strips, photographs)
 Public Archives

CREATIVE ARTS
 AND
 HANDICRAFTS

Nfld.:—Dept. of Education
 P.E.I.:—Dept. of Provincial Sec-
 retary, Tourist and Information
 Branch
 Dept. of Education, Physical
 Fitness Division
 N.S.:—Dept. of Trade and Industry,
 Handicrafts Division
 Nova Scotia College of Art
 Dept. of Education, Physical
 Fitness Division
 N.B.:—Dept. of Industry and De-
 velopment, Handicraft Division
 The New Brunswick Museum
 Dept. of Education, Physical
 Education and Recreation
 Branch
 Que.:—Dept. of Agriculture (rural
 handicrafts)
 Office of Provincial Secretary
 Dept. of Trade and Commerce
 Ont.:—Royal Ontario Museum
 Dept. of Education, Community
 Programs Branch
 Man.:—Dept. of Agriculture and
 Immigration (handicrafts)
 Dept. of Health and Public
 Welfare, Physical Fitness and
 Recreation Division
 Sask.:—Dept. of Education, Adult
 Education Division
 Fitness and Recreation Division
 Saskatchewan Arts Board
 Alta.:—Dept. of Economic Affairs
 (cultural activities)
 B.C.:—Provincial Museum (Indian
 handicrafts)
 Dept. of Education, Community
 Programs Branch
 Dept. of Industrial Development,
 Trade and Commerce

Dept. of Justice
 Clemency Branch
 The Penitentiary Commission
 Dept. of National Health and Welfare
 Research Division
 National Film Board (films, photo-
 graphs)
 Dominion Bureau of Statistics

CRIME AND
 DELINQUENCY

All Provinces:—Depts. of Attorney
 General
 Additional—
 Nfld., N.S., Alta.:—Depts. of
 Public Welfare
 P.E.I., B.C.:—Depts. of Health
 and Welfare
 Que.:—Dept. of Social Welfare
 and Youth
 Dept. of Trade and Commerce
 Bureau of Statistics.
 Ont.:—Dept. of Reform Insti-
 tutions
 Man.:—Dept. of Health and
 Public Welfare
 Sask.:—Dept. of Social Welfare

See pp. 84-91 of this volume for a
 list of Crown corporations giving the
 functions of each and the Cabinet
 Minister through which each reports
 to Parliament.

CROWN
 CORPORATIONS

For information with regard to in-
 dividual Crown corporations apply as
 follows:
 Nfld.:—Dept. of Economic De-
 velopment
 P.E.I.:—Dept. of Industry and
 Natural Resources
 Ont.:—Dept. of Provincial Secretary
 Man.:—Treasury Dept.
 Sask.:—Government Finance Office
 B.C.:—Attorney-General's Dept.

Bank of Canada
 Dept. of Finance
 Royal Canadian Mint

CURRENCY

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Agriculture Animal Husbandry Division Dairy Products Division Dairy Technology Research Unit Dept. of Trade and Commerce Agriculture and Fisheries Branch National Film Board (films, photographs in co-operation with the Dept. of Agriculture) Dominion Bureau of Statistics	DAIRYING	Nfld.:—Dept. of Mines and Resources P.E.I., N.S.:—Depts. of Agriculture N.B., Ont., Alta., B.C.:—Depts. of Agriculture, Dairy Branches (also Milk Control Board for Ont. and B.C.) Que.:—Dept. of Agriculture, Dairy Commission Dept. of Trade and Commerce Bureau of Statistics Man.:—Dept. of Agriculture and Immigration, Milk Control Board, Dairy Branch Sask.:—Dept. of Agriculture, Animal Industry Branch Milk Control Board
	DEATHS See "Vital Statistics"	
Dept. of National Defence Director of Public Relations Directorate of Naval Information Directorate of Public Relations (Army) Directorate of Public Relations (RCAF) Defence Research Board Dept. of Defence Production Canadian Commercial Corporation Defence Construction (1951) Limited Canadian Arsenal Limited Dept. of National Health and Welfare Civil Defence Division Dept. of External Affairs (North Atlantic Treaty Organization)	DEFENCE See also "Civil Defence"	
Dept. of Defence Production	DEFENCE PRODUCTION	
Dept. of National Health and Welfare	DISABLED PERSONS ALLOWANCES	Nfld.:—The Old Age Assistance Board P.E.I., N.B.:—Director of Disabled Persons Allowances N.S.:—Director of Old Age Assistance Que.:—Quebec Social Allowances Commission Ont.:—Disabled Persons Allowances Branch Man.:—The Old Age Assistance and Blind Persons' Allowances Board Sask.:—Dept. of Social Welfare Director of Public Assistance Alta.:—The Pensions Board B.C.:—The Disabled Persons Allowances Board

Sources for Federal Data

Subject

Sources for Provincial Data

Bank of Canada
Board of Transport Commissioners
Bureau of Transportation Economics
Central Mortgage and Housing Corporation
Dept. of Citizenship and Immigration
Canadian Citizenship Branch
Dept. of Trade and Commerce
Economics Branch
Dept. of Labour
Economics and Research Branch
Legislation Branch
Dept. of Mines and Technical Surveys
Dept. of Northern Affairs and National Resources (for forest and water resources and resources of Yukon and Northwest Territories)
Administration Branch
Water Resources Branch
Forestry Branch
Northern Administration and Lands Branch (for Eskimos)
Dept. of National Health and Welfare
Research and Statistics Division
Dept. of Agriculture
Economics Division
Dept. of Fisheries
Fisheries Research Board of Canada
Dept. of Defence Production
Economics and Statistics Branch
Dept. of Public Works
Economic Studies Unit
Public Archives (early data)
Dominion Bureau of Statistics

ECONOMIC
AND SOCIAL
RESEARCH

Nfld.:—Dept. of Economic Development
P.E.I.:—Dept. of Industry and Natural Resources
N.S.:—Dept. of Trade and Industry
Nova Scotia Research Foundation
N.B.:—Dept. of Industry and Development
Que.:—Dept. of Trade and Commerce, Economic Research Bureau, Bureau of Statistics
Ont.:—Bureau of Statistics and Research
Man.:—Dept. of Industry and Commerce
Sask.:—Executive Council, Economic Advisory and Planning Board
Executive Council, Industrial Development Office
Government Finance Office
Dept. of Co-operation and Co-operative Development, Research and Statistical Division
Center for Community Studies, University of Saskatchewan
Alta.:—Director of Industrial Development and Economic Research
Dept. of Economic Affairs
B.C.:—Dept. of Industrial Development, Trade and Commerce
Bureau of Economics and Statistics

Canada Council
Canadian Broadcasting Corporation (school broadcasts)
Dept. of Northern Affairs and National Resources
Northern Administration and Lands Branch (N.W.T.)
Dept. of National Health and Welfare
Dept. of Citizenship and Immigration
Canadian Citizenship Branch
Indian Affairs Branch
Dept. of Veterans Affairs (veterans and children of war dead)
Dept. of Labour
Canadian Vocational Training Branch
Dept. of Fisheries
Information and Educational Service
Dept. of Finance (university grants)
National Gallery of Canada (school broadcasts, lectures on art)
Dominion Bureau of Statistics

EDUCATION
See also
"Motion Pictures"
and "Photographic
Material"

All Provinces:—Depts. of Education (technical, visual, audio and all other phases of education)

Chief Electoral Office

ELECTIONS

Nfld.:—Dept. of Provincial Affairs
P.E.I., N.S.:—Depts. of Provincial Secretary
N.B.:—Dept. of Provincial Secretary-Treasurer
Que.:—Chief Returning-Officer
Ont.:—Attorney-General's Dept., Chief Election Officer
Man., B.C.:—Chief Electoral Officers
Sask., Alta.:—Clerks of the Executive Councils

Sources for Federal Data	Subject	Sources for Provincial Data
<p>Dept. of Northern Affairs and National Resources Water Resources Branch Northwest Territories Power Commission National Film Board (films, filmstrips, photographs) Dominion Bureau of Statistics (central electric stations)</p>	ELECTRIC POWER	<p>Nfld.:—Dept. of Economic Development, Power Commission P.E.I.:—Public Utility Commission N.S., Alta.:—Power Commissions N.B.:—New Brunswick Electric Power Commission Que.:—Hydro-Electric Commission Dept. of Hydraulic Resources Dept. of Agriculture Rural Electrification Bureau Ont.:—The Hydro-Electric Power Commission of Ontario Man.:—Manitoba Hydro Electric Board Dept. of Public Utilities Sask.:—Saskatchewan Power Corporation; Saskatchewan Power Commission B.C.:—Dept. of Lands and Forests British Columbia Power Commission Dept. of Industrial Development, Trade and Commerce Bureau of Economics and Statistics</p>
<p>Dept. of Labour Economics and Research Branch National Employment Service Civil Service Commission (opportunities for, and conditions of, employment in the Federal Civil Service) Dept. of Citizenship and Immigration Immigration Branch Dominion Bureau of Statistics</p>	EMPLOYMENT	<p>All Provinces:—Depts. of Agriculture (farm labour) Additional:—Nfld., N.S., Man., Sask.:—Depts. of Labour Que.:—Dept. of Labour, Provincial Employment Bureau Ont.:—Dept. of Labour Bureau of Statistics and Research Alta.:—Dept. of Industries and Labour B.C.:—Dept. of Labour Bureau of Economics and Statistics</p>
<p>Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (education, welfare, handicrafts, livelihood) Arctic Division (Eskimo problems) National Museum of Canada (historical and archaeological information, handicrafts) Canadian Wildlife Service (wildlife in Canada's North) Dept. of National Health and Welfare (health and hospital services) Royal Canadian Mounted Police (field duties)</p>	ESKIMOS	<p>Nfld.:—Dept. of Public Welfare, Division of Northern Labrador Affairs</p>
<p>Dept. of Trade and Commerce Canadian Government Exhibition Commission Dept. of Agriculture Information Service National Film Board (films, photographs) National Gallery of Canada (paintings, reproductions, etc.) Dept. of Northern Affairs and National Resources Editorial and Information Division (CNE) Canadian Government Travel Bureau (sportsmen's shows) Dept. of Fisheries Information and Educational Service</p>	EXHIBITIONS	<p>Nfld.:—Dept. of Provincial Affairs N.B.:—Dept. of Agriculture Que.:—Dept. of Agriculture Dept. of Trade and Commerce Ont.:—Most Ontario Departments organize exhibitions Man.:—Dept. of Agriculture and Immigration, Extension Service Dept. of Industry and Commerce Sask.:—Dept. of Agriculture Dept. of Travel and Information Alta.:—Dept. of Economic Affairs Dept. of Agriculture B.C.:—Depts. of Agriculture, Trade and Industry</p>
<p>Dept. of Mines and Technical Surveys Explosives Division</p>	EXPLOSIVES	<p>B.C.:—Dept. of Mines</p>

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of External Affairs Information Division Dept. of Trade and Commerce International Economic and Technical Co-operation Division (Colombo Plan) Dept. of Citizenship and Immigration Editorial and Information Division National Film Board (films)	EXTERNAL AFFAIRS	
Dept. of National Health and Welfare	FAMILY ALLOWANCES	
Dept. of Agriculture Field Husbandry Division Forage Crops Division Plant Products Division Dept. of Trade and Commerce Agriculture and Fisheries Branch National Film Board (films, photographs) Dominion Bureau of Statistics	FIELD CROPS	Nfld.:—Dept. of Mines and Resources P.E.I., N.S., N.B.:—Depts. of Agriculture Que.:—Dept. of Agriculture Dept. of Trade and Commerce Bureau of Statistics Ont.:—Dept. of Agriculture, Crops, Seeds and Weeds Branch Man.:—Dept. of Agriculture and Immigration Sask.:—Dept. of Agriculture, Plant Industry Branch Alta., B.C.:—Depts. of Agriculture, Field Crop Branches
Dept. of Finance Bank of Canada Dominion Bureau of Statistics	FINANCE See also "Taxation"	Nfld., B.C.:—Depts. of Finance P.E.I., Sask.:—Provincial Treasurer N.S.:—Dept. of Provincial Treasurer N.B.:—Dept. of Provincial Secretary-Treasurer Que.:—Dept. of Finance Dept. of Trade and Commerce Bureau of Statistics Ont.:—Provincial Treasurer's Dept. Man., Alta.:—Provincial Treasury Depts.
Dept. of Public Works Fire Prevention Branch (fire loss statistics) Dept. of Northern Affairs and National Resources Forestry Branch (federal interests) National Parks Branch Board of Transport Commissioners (forest-fire protection along railway lines) National Film Board (films, filmstrips, photographs, in relation to government prevention and conservation programs) National Research Council Division of Building Research, Fire Research Section	FIRE PREVENTION	All Provinces:—Provincial Fire Marshals (for urban and rural fire losses) Additional:—Nfld.:—Dept. of Mines and Resources N.S., Alta., B.C.:—Depts. of Lands and Forests N.B.:—Dept. of Lands and Mines Que.:—Dept. of Lands and Forests Forest Protection Service Dept. of Public Works, Fire Commissioner Ont.:—Dept. of Lands and Forests, Forest Protection Division Man.:—Dept. of Mines and Natural Resources Dept. of Labour, Fire Commissioner Sask.:—Dept. of Natural Resources Dept. of Labour, Fire Commissioner

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Fisheries Information and Educational Service Fisheries Research Board of Canada Dept. of Trade and Commerce Agriculture and Fisheries Branch National Film Board (films, filmstrips, photographs) Dept. of Finance Fisherman's Improvement Loans Unemployment Insurance Commission (unemployment insurance for fishermen)	FISHERIES	Nfld.:—Dept. of Fisheries and Co-operatives P.E.I.:—Dept. of Industry and Natural Resources N.S.:—Dept. of Trade and Industry Fisheries Division N.B.:—Dept. of Industry and Development, Fisheries Branch Que.:—Dept. of Game and Fisheries Dept. of Trade and Commerce, Bureau of Statistics Ont.:—Dept. of Lands and Forests Fish and Wildlife Division Man.:—Dept. of Mines and Natural Resources Game and Fisheries Branch Sask.:—Dept. of Natural Resources, Fisheries Branch Saskatchewan Fish Marketing Service Alta.:—Dept. of Lands and Forests, Fish and Game Branch B.C.:—Dept. of Recreation and Conservation
	FOOD AND DRUGS See "Standards" and "Nutrition"	
	FOREIGN AFFAIRS See "External Affairs"	
Bank of Canada	FOREIGN EXCHANGE	
Dept. of Northern Affairs and National Resources Forestry Branch federal interests Dept. of Agriculture Forest Biology Division Dept. of Trade and Commerce Commodities Branch National Film Board (films, filmstrips, photographs) Dominion Bureau of Statistics	FOREST RESOURCES	Nfld.:—Dept. of Mines and Resources P.E.I.:—Dept. of Industry and Natural Resources N.S., Que., Ont., Alta., B.C.:—Depts. of Lands and Forests N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Forestry Branch Sask.:—Dept. of Natural Resources, Forestry Branch
	FRUIT See "Horticulture"	
	FUEL See "Coal", "Oil and Natural Gas", "Forest Resources"	

Sources for Federal Data

Subject

Sources for Provincial Data

FUR FARMING

See also
"Trapping"

GEOGRAPHY

GEOLOGY

GOVERNMENT

For Senate of
Canada, House of
Commons and
Library of
Parliament see
"Parliament"

HEALTH

For Health of
Veterans
see "Veterans
Affairs"

HIGHWAYS

See
"Transportation"

Nfld.:—Dept. of Mines and Resources
Dept. of Economic Development
P.E.I., N.B., Alta., B.C.:—Depts. of Agriculture
N.S., Ont.:—Depts. of Lands and Forests
Que.:—Dept. of Agriculture
Dept. of Trade and Commerce
Bureau of Statistics
Man.:—Dept. of Mines and Natural Resources, Game and Fisheries Branch
Sask.:—Dept. of Natural Resources
Saskatchewan Fur Marketing Service

Nfld.:—Dept. of Mines and Resources
P.E.I.:—Travel Bureau
N.S.:—Dept. of Mines
N.B.:—Dept. of Lands and Mines
Que., B.C.:—Depts. of Lands and Forests
Man.:—Dept. of Mines and Natural Resources
Sask.:—Dept. of Natural Resources
Dept. of Travel and Information

Nfld.:—Dept. of Mines and Resources
N.S., B.C.:—Depts. of Mines
N.B.:—Dept. of Lands and Mines
Que.:—Dept. of Mines
Geological Surveys Branch
Ont.:—Dept. of Mines
Geological Branch
Man.:—Dept. of Mines and Natural Resources, Mines Branch
Sask.:—Dept. of Mineral Resources
Alta.:—Dept. of Mines and Minerals

Nfld.:—Dept. of Provincial Affairs
P.E.I., N.S., Ont., Man., Sask., Alta., B.C.:—Depts. of Provincial Secretary
N.B.:—Dept. of Provincial Secretary-Treasurer
Que.:—Office of Provincial Secretary

Nfld., Que., Ont.:—Depts. of Health
P.E.I.:—Dept. of Health and Welfare
N.S., Sask., Alta.:—Depts. of Public Health
N.B.:—Dept. of Health and Social Services
Man.:—Dept. of Health and Public Welfare
B.C.:—Dept. of Health and Welfare (general)
Dept. of Provincial Secretary (mental hospitals)
British Columbia Hospital Insurance Commission

Dept. of Agriculture
Marketing Service (fur grading)
Experimental Farms Service (ranch fur production)
Dept. of Trade and Commerce
Agriculture and Fisheries Branch
Dominion Bureau of Statistics

Dept. of Mines and Technical Surveys
Geographical Branch
Canadian Board on Geographical Names
Dept. of Agriculture
Field Husbandry Division (soil surveys)
Dept. of Fisheries
Fisheries Research Board of Canada (oceanography)
National Film Board (films, filmstrips)
Public Archives

Dept. of Mines and Technical Surveys
Geological Survey of Canada

Chief Electoral Office (Electoral Act and Voters Lists)
Dept. of Secretary of State (federal-provincial channel of communication)
Dept. of Citizenship and Immigration
Canadian Citizenship Branch
Dept. of Northern Affairs and National Resources (for Yukon and Northwest Territories)
Public Archives (early official records)
Privy Council Office (appointments, orders in council, statutory orders and regulations)

Dept. of National Health and Welfare
Dept. of Northern Affairs and National Resources (for N.W.T.)
National Film Board (films, filmstrips, photographs)
Dominion Bureau of Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Northern Affairs and National Resources National Parks Branch (historic sites and monuments) Dept. of National Defence Director of Public Relations Naval Historian Directorate of History (Army) Air Historian Public Archives National Film Board (films, filmstrips) Dominion Bureau of Statistics	HISTORY	Nfld.:—Legislative Library Memorial University Gosling Memorial Library P.E.I.:—Travel Bureau N.S.:—Public Archives N.B.:—Legislative Library Que.:—Office of Provincial Secretary Provincial Archives Provincial Library Ont.:—Legislative Library Bureau of Statistics and Research Provincial Archivist Man.:—Provincial Library and Archives Sask.:—Legislative Library, Archives Division Alta.:—Archives, Provincial Library Dept. of Economic Affairs Publicity Bureau B.C.:—Dept. of Education Provincial Archivist
Dept. of Agriculture Marketing Service, Fruit and Vegetable Division Experimental Farms Service, Horticulture Division	HORTICULTURE	Nfld.:—Dept. of Mines and Resources P.E.I.:—Dept. of Agriculture N.S., N.B., Alta., B.C.:—Depts. of Agriculture, Horticultural Branches Que.:—Dept. of Agriculture, Fruit Branch Ont.:—Dept. of Agriculture, Agriculture and Horticulture Branches Man.:—Dept. of Agriculture and Immigration Sask.:—Dept. of Agriculture, Plant Industry Branch
Dept. of National Health and Welfare Dept. of Veterans Affairs (veterans' hospitals) Dept. of National Defence (armed forces hospitals) Dominion Bureau of Statistics	HOSPITALS	Nfld., Que.:—Depts. of Health P.E.I.:—Dept. of Health and Welfare N.S., Sask., Alta.:—Depts. of Public Health N.B.:—Dept. of Health and Social Services Ont.:—Hospital Services Commission of Ontario Man.:—Dept. of Health and Public Welfare B.C.:—Dept. of Health and Welfare (general) Dept. of Provincial Secretary (mental hospitals) British Columbia Hospital Insurance Commission
	HOUSE OF COMMONS See "Parliament"	
Central Mortgage and Housing Corporation (long-term mortgage loans for new farm houses; National Housing Act financing; building standards; house designs; mortgage lending activities; insurance of loans)	HOUSING	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Citizenship and Immigration Canadian Citizenship Branch Immigration Branch Dept. of Labour Special Services Branch Dept. of National Health and Welfare Quarantine, Immigration Medical and Sick Mariners Division National Film Board (films, photographs) Dominion Bureau of Statistics	IMMIGRATION	P.E.I.:—Dept. of Industry and Natural Resources Ont.:—Dept. of Planning and Development Bureau of Statistics and Research Man.:—Dept. of Agriculture and Immigration Sask.:—Dept. of Social Welfare Alta.:—Dept. of Economic Affairs
	INCOME TAX See "Taxation"	
Dept. of Citizenship and Immigration Canadian Citizenship Branch Indian Affairs Branch Dept. of Northern Affairs and National Resources National Museum of Canada (historical and archaeological information) Dept. of National Health and Welfare (health and hospital services)	INDIANS	Nfld.:—Dept. of Public Welfare (Indians in Labrador) Que.:—Dept. of Fish and Game (fur preserves) B.C.:—Dept. of Labour, Provincial Advisory Committee on Indian Affairs
National Industrial Design Council National Gallery of Canada (films, reference library, photographic library, exhibitions)	INDUSTRIAL DESIGN	
	INDUSTRIAL DEVELOPMENT See "Manufacturing"	
Dept. of Insurance (Dominion, British and foreign companies, Federal Civil Service insurance) Dept. of Labour Annuities Branch Dept. of Veterans Affairs Veterans Insurance Branch Dept. of Trade and Commerce Export Credits Insurance Corporation Central Mortgage and Housing Corporation (insures loans made under National Housing Act 1954) Dominion Bureau of Statistics (summary statistics of all types of insurance)	INSURANCE— LIFE, FIRE, ETC. For Unemployment Insurance see "Labour"	Nfld.:—Dept. of Provincial Affairs P.E.I., N.S., N.B., Man., Alta., B.C.:—Superintendents of Insurance Que.:—Finance Dept., Insurance Branch Ont.:—Dept. of Insurance Sask.:—Superintendent of Insurance, Government Insurance Office
Dept. of Mines and Technical Surveys Dept. of Trade and Commerce Commodities Branch Dominion Bureau of Statistics	IRON AND STEEL	Nfld.:—Dept. of Mines and Resources N.S.:—Dept. of Mines Research Foundation N.B.:—Dept. of Lands and Mines Que.:—Dept. of Trade and Commerce, Bureau of Statistics Dept. of Mines Ont.:—Dept. of Planning and Development, Trade and Industry Branch Bureau of Statistics and Research Man.:—Dept. of Industry and Commerce Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals Dept. of Economic Affairs B.C.:—Dept. of Mines Bureau of Economics and Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Justice Dominion Bureau of Statistics	JUSTICE	All Provinces:—Depts. of Attorney General
Dept. of Labour Information Branch Labour Gazette Branch Government Annuities Branch Legislation Branch Economics and Research Branch Canada Labour Relations Board Canadian Vocational Training Branch Civilian Rehabilitation Branch Industrial Relations Branch (conciliation of labour disputes, payment of fair wages on government contracts, promotion of labour-management production committees, fair employment practices) International Labour Organization Branch National Advisory Council on Manpower Special Services Branch Women's Bureau Unemployment Insurance Commission National Employment Service Dept. of National Health and Welfare (occupational health) Dept. of Secretary of State Companies Division Dominion Bureau of Statistics	LABOUR See also "Workmen's Compensation"	Nfld., P.E.I., N.S., N.B., Man., Sask.:—Depts. of Labour Que., Ont., B.C.:—Depts. of Labour Provincial Bureaus of Statistics Alta.:—Dept. of Industries and Labour Provincial Bureau of Statistics
Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (Yukon and Northwest Territories) Dept. of Mines and Technical Surveys Surveyor General of Canada Dept. of Veterans Affairs Soldier Settlement and Veterans' Land Act Branch Dept. of Citizenship and Immigration Immigration Branch (for land settlement) Dept. of Transport Lands Branch	LANDS AND LAND SETTLEMENT	Nfld.:—Dept. of Mines and Resources P.E.I.:—Commissioner of Public Lands N.S.:—Dept. of Agriculture, Land Settlement Board N.B.:—Dept. of Lands and Mines Que.:—Dept. of Lands and Forests Dept. of Colonization Ont., Alta.:—Depts. of Lands and Forests Man.:—Dept. of Mines and Natural Resources, Lands Branch Sask.:—Dept. of Agriculture, Lands Branch; Attorney General, Land Titles B.C.:—Dept. of Agriculture, Land Clearing; Dept. of Lands and Forests
Royal Canadian Mounted Police <i>(Enforces Federal Statutes in all parts of Canada; also carries out, on behalf of Attorneys General and under contract, enforcement of the Criminal Code and Provincial Statutes in all provinces except Quebec and Ontario; is the only law-enforcement body in the Yukon and Northwest Territories and assists in the welfare of Eskimos and Indians in these territories.)</i>	LAW ENFORCEMENT	All Provinces:—Depts. of Attorney General

Sources for Federal Data

Subject

Sources for Provincial Data

Clerk of the Senate of Canada
Clerk of the House of Commons
Privy Council Office
Dept. of Justice
Dept. of Northern Affairs and
National Resources (for Yukon
and Northwest Territories)
Dept. of Public Printing and Sta-
tionery
For Acts administered by individual
Federal Depts., see pp. 91-95 of
this volume.

LEGISLATION
For
Statutory Orders
and Regulations
see "Government"

All Provinces except Man. and
B.C.:—Depts. of Attorney Gen-
eral
Man.:—Legislative Council
B.C.:—Dept. of Provincial Secretary

LIBRARIES
See "Bibliography:
Books"

Chief Electoral Office (for local
referendum under Canada Tem-
perance Act)
Dept. of Northern Affairs and
National Resources
Northern Administration and
Lands Branch (Yukon and
Northwest Territories)
Dept. of Secretary of State
Special Division
Dominion Bureau of Statistics

LIQUOR
CONTROL

Nfld.:—Dept. of Finance
P.E.I.:—Temperance Commission
N.S., Que.:—Liquor Commissions
N.B., Ont., Alta., B.C.:—Liquor
Control Boards
Man.:—Liquor Control Commission
Sask.:—Liquor Board

Dept. of Agriculture
Livestock Products Division (for
marketing data)
Poultry Products Division (for
marketing data)
Livestock and Poultry Division
(for breeding programs and
testing data)
Health of Animals Division (for
administration of disease control
regulations, meat inspection,
and research in animal diseases)
Animal Husbandry Division (for
general information)
Dept. of Trade and Commerce
Agriculture and Fisheries Branch
National Film Board (films, photo-
graphs, in relation to Dept. of
Agriculture)
Dominion Bureau of Statistics

LIVESTOCK

Nfld.:—Dept. of Mines and Re-
sources
P.E.I., N.B., Ont.:—Depts. of
Agriculture, Livestock Branches
N.S.:—Dept. of Agriculture, Animal
Husbandry Branch
Que.:—Dept. of Agriculture, Animal
Husbandry Branch
Dept. of Trade and Commerce
Bureau of Statistics
Man.:—Dept. of Agriculture and
Immigration, Livestock Branch
Sask.:—Dept. of Agriculture, Animal
Industry Branch
Alta., B.C.:—Provincial Bureaus of
Statistics
Depts. of Agriculture, Livestock
Branches

Dept. of Northern Affairs and
National Resources
Forestry Branch (federal interests)
Dept. of Trade and Commerce
Commodities Branch
National Film Board (films, film-
strips, photographs, in relation
to departmental conservation
and development programs)
Dominion Bureau of Statistics

LUMBERING

Nfld.:—Dept. of Mines and Re-
sources
P.E.I.:—Dept. of Industry and
Natural Resources
N.S., Que., Ont., Alta.:—Depts.
of Lands and Forests
N.B.:—Dept. of Lands and Mines
Man.:—Dept. of Mines and Natural
Resources, Forestry Branch
Sask.:—Dept. of Natural Resources,
Forestry Branch
Industrial Development Office
Saskatchewan Timber Board
B.C.:—Dept. of Lands and Forests
Dept. of Industrial Development,
Trade and Commerce
Bureau of Economics and Sta-
tistics

Sources for Federal Data	Subject	Sources for Provincial Data
<p>Dept. of Secretary of State Companies Division Dept. of Trade and Commerce Commodities Branch Industrial Development Branch Dept. of Defence Production (for defence items) Bank of Canada Industrial Development Bank National Research Council Canadian Patents and Development Limited (utilization of new scientific processes) National Film Board (films, filmstrips and photographs) Dominion Bureau of Statistics</p>	<p>MANUFACTURING</p> <p>See also "Crown Corporations"</p>	<p>Nfld.:—Dept. of Economic Development P.E.I.:—Dept. of Industry and Natural Resources N.S., B.C.:—Depts. of Trade and Industry N.B.:—Dept. of Industry and Development Que.:—Dept. of Trade and Commerce, Bureau of Statistics Ont.:—Dept. of Planning and Development, Trade and Industry Branch Bureau of Statistics Man.:—Dept. of Industry and Commerce Sask.:—Economic Advisory and Planning Board Industrial Development Office Government Finance Office Dept. of Co-operation and Co-operative Development Trade and Business Information Services Alta.:—Dept. of Economic Affairs Bureau of Statistics B.C.:—Bureau of Economics and Statistics</p>
<p>Dept. of Mines and Technical Surveys Geographical Branch Surveys and Mapping Branch (geological, topographical and general maps; aeronautical and marine navigation charts) Geological Survey of Canada Dept. of Agriculture (soil survey and economic survey maps) Public Archives (maps relating to history and cartography) Dept. of Fisheries Information and Educational Service (fisheries maps) Dept. of Transport (meteorological maps) National Research Council Division of Building Research Climatological Atlas of Canada Dominion Bureau of Statistics (economic and census maps)</p>	<p>MAPS AND CHARTS</p>	<p>Nfld.:—Dept. of Mines and Resources P.E.I.:—Dept. of Public Works and Highways N.S.:—Dept. of Mines Research Foundation N.B.:—Dept. of Lands and Mines Que.:—Dept. of Lands and Forests Dept. of Mines Dept. of Trade and Commerce Cartography Service Dept. of Agriculture Ont.:—Dept. of Lands and Forests Dept. of Mines Man.:—Dept. of Mines and Natural Resources, Surveys Branch Sask.:—Dept. of Natural Resources Dept. of Travel and Information Alta., B.C.:—Depts. of Lands and Forests.</p>
	<p>MARRIAGES</p> <p>See "Vital Statistics"</p>	
<p>Dept. of Agriculture Economics Division (Co-operatives) Dominion Bureau of Statistics</p>	<p>MERCHANDISING</p>	<p>Man.:—Dept. of Industry and Commerce Sask.:—Industrial Development Office Alta.:—Dept. of Industries and Labour B.C.:—Dept. of Industrial Development, Trade and Commerce Bureau of Economics and Statistics</p>
<p>Dept. of Mines and Technical Surveys Mines Branch Geological Survey of Canada Dept. of Trade and Commerce Commodities Branch Dominion Bureau of Statistics (for production data)</p>	<p>METALS</p> <p>(other than Iron and Steel)</p>	<p>Nfld.:—Dept. of Mines and Resources N.S., Que., Ont.:—Depts. of Mines N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Mines Branch Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals B.C.:—Bureau of Economics and Statistics Dept. of Mines</p>

Sources for Federal Data	Subject	Sources for Provincial Data
	METEOROLOGY See "Weather"	
Dept. of Mines and Technical Surveys Dept. of Northern Affairs and National Resources (for Yukon and Northwest Territories) Dominion Bureau of Statistics (for production data)	MINING AND MINERALS	Nfld.:—Dept. of Mines and Resources N.S., Que., Ont., B.C.:—Depts. of Mines N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Mines Branch Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals
National Film Board <i>(Produces documentary films, news-reels and short subjects for theatrical, non-theatrical and television distribution; film-strips and photographs for informational, educational and archival purposes; other visual materials devoted to the interpretation of the Canadian scene to audiences both at home and abroad; and maintains a large film preview library for the benefit of government departments and other official bodies.)</i> Dept. of National Health and Welfare Information Services Division National Gallery of Canada (maintains a library of films on art.)	MOTION PICTURES	Nfld., P.E.I., N.B., Ont.:—Buy such films but do not produce them N.S., Que., Alta., B.C.:—Produce educational or informational films Man.:—Dept. of Industry and Commerce Sask.:—Dept. of Travel and Information Dept. of Education, Visual Education Branch Dept. of Labour (film censor) Alta.:—Dept. of Economic Affairs, Photographic Branch B.C.:—Dept. of Trade and Industry Photographic Branch <i>All provinces have Motion Picture Censorship Boards. Details may be obtained by application to the province concerned: Depts. of Education and Travel, Provincial Censorship Boards and Regional National Film Board Offices.</i>
Dominion Bureau of Statistics Public Finance and Transportation Division	MUNICIPAL AFFAIRS	Nfld.:—Dept. of Municipal Affairs and Supply P.E.I.:—Dept. of Industry and Natural Resources N.S., N.B., Que., Ont., Sask., Alta., B.C.:—Depts. of Municipal Affairs Man.:—Dept. of Municipal Commissioner
National Gallery of Canada (paintings, sculpture, etc.) Public Archives (and Canadian War Museum) Laurier House, Ottawa (historical) Dept. of Northern Affairs and National Resources National Parks Branch National Museum of Canada Historic Parks Museums	MUSEUMS	Nfld.:—Dept. of Provincial Affairs N.S.:—Nova Scotia Museum of Fine Arts, Public Archives of Nova Scotia, Provincial Museum of Nova Scotia, Halifax N.B.:—New Brunswick Museum, Saint John Que.:—The Archives, Musée de la Province de Québec, Quebec Commercial and Industrial Museum of Montreal Ont.:—Royal Ontario Museum (including Archaeology, Geology, Mineralogy, Paleontology and Zoology) and Ontario Archives, Toronto Man.:—Manitoba Museum, Winnipeg Sask.:—Dept. of Natural Resources Provincial Museum B.C.:—Provincial Museum of Natural History and Anthropology, Provincial Archives (including Helmcken House), Victoria Does not include provincial universities of Sask., Alta. and B.C.

Sources for Federal Data	Subject	Sources for Provincial Data
Dominion Bureau of Statistics	NATIONAL ACCOUNTS	
Dept. of Citizenship and Immigration Canadian Citizenship Registration Branch	NATURALIZATION See also "Population"	
Dept. of Public Works (acquisition, construction and improvement of harbour and river works, including construction and operation of graving docks and marine engineering generally). Harbours and Rivers Engineering Branch and Information Services		
Dept. of Transport Marine and Canal Services (aids to marine navigation) Telecommunications Branch (radio aids to navigation)	NAVIGATION	
National Research Council Radio and Electrical Engineering Division (applications of radar to navigation) Division of Mechanical Engineering (model testing basin and Seaway models)		
Dept. of Mines and Technical Surveys Hydrographic Service Legal Surveys and Aeronautical Charts Division National Harbours Board Canadian Maritime Commission		
Dept. of National Health and Welfare Nutrition Division Dept. of Agriculture Consumer Section Dept. of Fisheries Inspection and Consumer Service	NUTRITION	Nfld., Que., Ont.:—Depts. of Health P.E.I., B.C.:—Depts. of Health and Welfare N.S.:—Dept. of Public Health N.B.:—Dept. of Health and Social Services Man.:—Dept. of Health and Public Welfare Sask.:—Dept. of Public Health, Nutrition Division Alta.:—Dept. of Agriculture, Nutri- tionist
	OCCUPATIONAL INFORMATION See "Employment"	
Dept. of Mines and Technical Surveys Geological Survey of Canada Mines Branch Dept. of Northern Affairs and National Resources (for Yukon and Northwest Territories) Dept. of Defence Production Northern Ontario Pipe Line Crown Corporation Dept. of Trade and Commerce Standards Branch Dominion Bureau of Statistics	OIL AND NATURAL GAS	Nfld.:—Dept. of Mines and Re- sources N.S., Ont., B.C.:—Depts. of Mines N.B.:—Dept. of Lands and Mines Man.:—Dept. of Mines and Natural Resources, Mines Branch Sask.:—Dept. of Mineral Resources Alta.:—Dept. of Mines and Minerals Bureau of Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of National Health and Welfare Dept. of Northern Affairs and National Resources (Yukon and Northwest Territories)	OLD AGE ASSISTANCE	Nfld., N.S., B.C.:—Old Age Assistance Boards P.E.I., Ont.:—Director of Old Age Assistance N.B.:—The Old Age and Blind Assistance Board Que.:—Quebec Social Allowances Commission Man.:—The Old Age Assistance and Blind Persons' Allowances Board Sask.:—Dept. of Social Welfare, Public Assistance Division Alta.:—The Pensions Board
Dept. of National Health and Welfare	OLD AGE SECURITY PENSIONS	
Dept. of Northern Affairs and National Resources National Parks Branch National Film Board (films, photographs) Federal District Commission	PARKS	Nfld.:—Dept. of Mines and Resources N.S., Ont., Alta.:—Depts. of Lands and Forests N.B.:—Dept. of Lands and Mines Que.:—Dept. of Game and Fisheries Man.:—Dept. of Mines and Natural Resources, Forestry Branch Sask.:—Dept. of Travel and Information B.C.:—Dept. of Recreation and Conservation
The Senate The House of Commons Library of Parliament Privy Council Office	PARLIAMENT	Nfld.:—Dept. of Provincial Affairs P.E.I., N.B., Man., Sask., Alta., B.C.:—Legislative Assemblies N.S., Ont.:—Houses of Assembly Que.:—Legislative Council Legislative Assembly
Dept. of Secretary of State Patent and Copyright Office Trade Marks Office National Library (handles all copyright books)	PATENTS, COPYRIGHTS AND TRADE MARKS	
Dept. of Mines and Technical Surveys The National Air Photographic Library National Film Board Public Archives (historical)	PHOTOGRAPHIC MATERIAL See also "Motion Pictures" and "Tourist Trade"	Photographs are available from many provincial government departments in all provinces.

Sources for Federal Data	Subject	Sources for Provincial Data
<p>Dominion Bureau of Statistics (for all census population statistics)</p> <p>Dept. of Northern Affairs and National Resources</p> <p>Northern Administration and Lands Branch (for Eskimos)</p> <p>Dept. of Citizenship and Immigration</p> <p>Canadian Citizenship Branch</p> <p>Immigration Branch</p> <p>Indian Affairs Branch (for Indians)</p> <p>Public Archives (early census and settlement records)</p>	POPULATION	<p>Nfld.:—Dept. of Health</p> <p>P.E.I.:—Travel Bureau</p> <p>N.S.:—Dept. of Public Health, Vital Statistics Branch</p> <p>N.B.:—Dept. of Health and Social Services, Vital Statistics Branch</p> <p>Que.:—Dept. of Health, Vital Statistics Branch</p> <p>Dept. of Trade and Commerce</p> <p>Bureau of Statistics</p> <p>Ont.:—Bureau of Statistics and Research</p> <p>Man.:—Dept. of Industry and Commerce</p> <p>Dept. of Municipal Affairs</p> <p>Sask.:—Dept. of Public Health</p> <p>Vital Statistics Branch</p> <p>Legislative Library</p> <p>Alta.:—Dept. of Industries and Labour, Provincial Statistician</p> <p>B.C.:—Dept. of Health and Welfare</p> <p>Vital Statistics</p> <p>Dept. of Industrial Development, Trade and Commerce, Bureau of Economics and Statistics</p>
<p>Post Office Department</p> <p>Administration Branch (general postal information, postage rates, both domestic and foreign, etc.)</p> <p>Transportation Branch (air, land and railway mail services)</p> <p>Financial Branch (information regarding money orders, savings bank, philatelic services, etc.)</p> <p>Operations Branch (information regarding postal service to the public and hours of service)</p> <p>Personnel Branch (personnel, training, employee services)</p>	POST OFFICE	
<p>Dept. of Agriculture</p> <p>Poultry Husbandry Division, Experimental Farms Service (for general information)</p> <p>Poultry Products Division (for marketing data)</p> <p>Livestock and Poultry Division (breeding programs, hatchery regulations, etc.)</p> <p>Health of Animals Division (for poultry diseases)</p> <p>Dept. of Trade and Commerce</p> <p>Agriculture and Fisheries Branch</p> <p>Dominion Bureau of Statistics</p>	POULTRY	<p>Nfld.:—Dept. of Mines and Resources</p> <p>P.E.I., N.S.:—Depts. of Agriculture</p> <p>N.B., Alta., B.C.:—Depts. of Agriculture, Poultry Branches</p> <p>Que.:—Dept. of Agriculture</p> <p>Poultry Division</p> <p>Dept. of Trade and Commerce</p> <p>Bureau of Statistics</p> <p>Ont.:—Ontario Agricultural College (Guelph), Poultry Division</p> <p>Man.:—Dept. of Agriculture and Immigration</p> <p>Sask.:—Dept. of Agriculture</p> <p>Animal Industry Branch</p>
	POWER See "Electric Power"	
<p>Dept. of Secretary of State</p> <p>Special Division</p>	PRECEDENCE AND CEREMONIAL	
<p>Dept. of Agriculture</p> <p>Marketing Service (prices of farm products)</p> <p>Agricultural Prices Support Board</p> <p>Dept. of Fisheries</p> <p>Fisheries Prices Support Board</p> <p>Dominion Bureau of Statistics</p>	PRICES	<p>Man.:—Dept. of Industry and Commerce</p> <p>Sask.:—Economic Advisory and Planning Board</p> <p>B.C.:—Dept. of Industrial Development, Trade and Commerce, Bureau of Economics and Statistics</p>

Sources for Federal Data

Subject

Sources for Provincial Data

Dept. of Secretary of State
Registration Division
Public Archives (early records)

PUBLIC DOCUMENTS

(Commissions of Appointment, Proclamations, Federal Land Grants, etc.)

Ont.:—Dept. of Provincial Secretary

PUBLIC HEALTH

See "Health"

Dominion Bureau of Statistics

PUBLIC UTILITIES

See also
"Electric Power"

Nfld.:—Public Utilities Board
P.E.I., B.C.:—Public Utilities Commissions
N.S., N.B.:—Boards of Commissioners of Public Utilities
Que.:—Public Service Board
Ont.:—Ontario Municipal Board
The Hydro-Electric Power Commission of Ontario
Ontario Telephone Authority
Ontario Fuel Board.
Man.:—Dept. of Public Utilities
Sask.:—Government Finance Office
Saskatchewan Government Telephones
Saskatchewan Power Corporation
Alta.:—Board of Public Utilities Commissioners
Natural Gas Utilities Board

PUBLIC WELFARE

See "Welfare"

Dept. of Labour
Industrial Relations Branch (fair wages)
Dept. of Public Works
Information Services
Dept. of Transport
Marine, Canal and Air Services
St. Lawrence Seaway Authority
(St. Lawrence Seaway and Power Project)

PUBLIC WORKS

All Provinces except N.S.:—Depts. of Public Works
N.S.:—Dept. of Highways and Public Works
Ont.:—The Hydro-Electric Power Commission of Ontario (St. Lawrence Power Project)

Dept. of Transport
Telecommunications Branch (all matters affecting licences and facilities)
Canadian Broadcasting Corporation
(national broadcasting in Canada, including radio and television, regulations for control of programs, international short-wave service)
National Research Council
Radio and Electrical Engineering Division (radio science and its application to industry)

RADIO

RAILWAYS

See
"Transportation"

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Northern Affairs and National Resources Water Resources Branch (for Y.T. and N.W.T. and federal interests in the provinces) Central Mortgage and Housing Corporation	<div>RECONSTRUCTION AND DEVELOPMENT</div>	Nfld.:—Dept. of Economic Development P.E.I.:—Dept. of Industry and Natural Resources N.S.:—Depts. of Municipal Affairs, and Trade and Industry N.B.:—Dept. of Industry and Development Que.:—Depts. of Lands and Forests, Labour, Roads, Trade and Commerce, Social Welfare and Youth Ont.:—Dept. of Planning and Development Man.:—Dept. of Industry and Commerce Sask.:—Dept. of Social Welfare, Rehabilitation Division Alta.:—Dept. of Economic Affairs B.C.:—Dept. of Industrial Development, Trade and Commerce Bureau of Economics and Statistics
Dept. of Northern Affairs and National Resources National Parks Branch Canadian Government Travel Bureau Northern Administration and Lands Branch (for Y.T. and N.W.T.) Dept. of Citizenship and Immigration Canadian Citizenship Branch Indian Affairs Branch (for Indians) Dept. of National Health and Welfare National Film Board (films, filmstrips, photographs in connection with the Dept. of National Health and Welfare)	<div>RECREATION See also "Health"</div>	P.E.I., N.S., N.B., Que., Ont., Sask.:—Depts. of Education Man.:—Dept. of Health and Public Welfare Alta.:—Dept. of Economic Affairs, Community Recreation Branch B.C.:—Dept. of Recreation and Conservation
Dept. of Veterans Affairs Dept. of Labour Civilian Rehabilitation Branch Dept. of National Health and Welfare Dept. of Citizenship and Immigration Indian Affairs Branch National Film Board (films)	<div>REHABILITATION</div>	P.E.I.:—Dept. of Education (Co-ordinator, Rehabilitation Branch) N.S.:—Dept. of Public Health (Provincial Rehabilitation Co-ordinator) N.B.:—Dept. of Health and Social Services (Provincial Co-ordinator of Rehabilitation) Que.:—Dept. of Social Welfare and Youth Dept. of Labour Man.:—Dept. of Health and Public Welfare (Provincial Co-ordinator of Rehabilitation Services) Sask.:—Dept. of Social Welfare, Rehabilitation Division Alta.:—Dept. of Public Welfare (Co-ordinator of Rehabilitation of Disabled Persons) B.C.:—Dept. of Health and Welfare (Rehabilitation Co-ordinator)
Canada Council (humanities and social sciences)	<div>RESEARCH See also "Economic and Social Research" and "Scientific Research"</div>	

Sources for Federal Data

Subject

Sources for Provincial Data

SCIENTIFIC
RESEARCH

National Research Council
Laboratory Divisions (for investigations in applied biology, building research, pure and applied chemistry, mechanical engineering, including aeronautics and hydraulics, pure and applied physics, radio and electrical engineering)
Regional Laboratories at Saskatoon, Sask., and Halifax, N.S.
Division of Medical Research (Scholarships and grants-in-aid for graduate research in the universities)
Inquiries for general research information should be addressed to the Technical Information Service.
Dept. of Mines and Technical Surveys
Mines Branch
Dominion Observatories
Dept. of Northern Affairs and National Resources
Forestry Branch (federal interests)
National Parks Branch, Canadian Wildlife Services, National Museum of Canada
Dept. of Agriculture
Science Service (for research in botany and plant pathology, bacteriology, chemistry, entomology, etc.)
Experimental Farms Service (for research in agricultural engineering, crop production, breeding and genetics, plant and animal nutrition, etc.)
Production Service (for research in animal diseases)
Dept. of Transport (aviation, radio, meteorology, navigation)
Dept. of National Defence
Defence Research Board, Directorate of Public Relations
Dept. of National Health and Welfare
Dept. of Veterans Affairs
Treatment Services Branch (medical research)
Fisheries Research Board of Canada

Nfld.:—Dept. of Economic Development
P.E.I.:—Dept. of Industry and Natural Resources
N.S.:—Nova Scotia Research Foundation
N.B.:—Dept. of Industry and Development, Research and Development Division
Que.:—Dept. of Trade and Commerce, Scientific Research Bureau
Ont.:—Ontario Research Foundation
Man.:—Various Depts., such as Health and Welfare, Mines and Natural Resources, Agriculture and Immigration, Industry and Commerce
Sask.:—Saskatchewan Research Council
Alta.:—Alberta Research Council
B.C.:—Dept. of Industrial Development, Trade and Commerce Research Council

SENATE
See "Parliament"

SMALL LOANS
AND
MONEY-LENDERS
See "Banking"

Sources for Federal DataSubjectSources for Provincial DataSOCIAL
SECURITY

See

"Family
Allowances""Blindness
Allowances""Old Age
Assistance""Old Age
Security""Disabled Persons
Allowances""Workmen's
Compensation"

"Labour"

"Unemployment"

"Veterans Affairs"

"Economic and
Social Research"

SOCIAL WELFARE

See "Welfare"

Dept. of Trade and Commerce
Standards Branch (for inquiries
on electricity and gas inspection,
weights and measures, precious
metals marking, commodity
standards and national trade
mark matters)

Dept. of National Health and
Welfare (for standards and
method of control of quality or
potency of food and drugs)

Dept. of Agriculture (for inquiries
on standards for meat and
canned food, fruit, honey, maple
products, vegetables, dairy prod-
ucts, poultry, etc.)

Dept. of Transport (standards in
radio frequencies, standards in
steamship inspection)

National Research Council

Applied Physics Division (funda-
mental physical and electrical
standards)

Division of Building Research,
Specifications Section

Dept. of Fisheries (standards of fish
products)

Canadian Government Specifications
Board (specifications for pur-
chasing)

Canadian Standards Association

Central Mortgage and Housing
Corporation

STANDARDS
AND
SPECIFICATIONS

Sources for Federal Data	Subject	Sources for Provincial Data
	STEAMSHIPS See "Transportation"	
	SUCCESSION DUTIES See "Taxation"	
Dept. of National Revenue Taxation Division (Income Tax and Succession Duties statistics and information) Customs and Excise Division (Customs, Excise and Sales Tax statistics and information) Dept. of Finance (Budget papers reviewing taxation policy, changes in rates, revenue fore- casts)	TAXATION	Nfld., Que.:—Depts. of Finance P.E.I.:—Provincial Treasurer N.S.:—Dept. of Provincial Secretary N.B.:—Dept. of Provincial Secre- tary-Treasurer Ont.:—Provincial Treasurer's Dept. Man., Sask.:—Provincial Treasury Depts. Alta.:—Provincial Treasurer's Dept. Provincial Secretary B.C.:—Dept. of Finance, Surveyor of Taxes
	TELEGRAPHS AND TELEPHONES See "Communications"	
Canadian Broadcasting Corporation Dept. of Transport Telecommunications Branch National Research Council National Film Board (films)	TELEVISION See also "Radio"	
Dept. of Mines and Technical Surveys Surveys and Mapping Branch National Research Council Applied Physics Division (photo- grammetric research)	TOPOGRAPHY	Nfld.:—Dept. of Mines and Re- sources N.S.:—Dept. of Mines, Nova Scotia Research Foundation N.B.:—Dept. of Lands and Mines Que.:—Dept. of Lands and Forests Dept. of Trade and Commerce Cartography Service Dept. of Mines Ont.:—Dept. of Lands and Forests, Surveys Branch Man.:—Dept. of Mines and Natural Resources Sask.:—Dept. of Natural Resources Alta., B.C.:—Depts. of Lands and Forests
Dept. of Northern Affairs and National Resources National Parks Branch Canadian Government Travel Bureau Dept. of Trade and Commerce Canadian Government Exhibition Commission (displays) National Film Board (films, photo- graphs) Dominion Bureau of Statistics	TOURIST TRADE	Nfld.:—Tourist Development Board P.E.I.:—Dept. of Provincial Secre- tary, Tourist and Information Branch N.S.:—Dept. of Trade and Industry, Travel Bureau N.B.:—New Brunswick Travel Bu- reau Que.:—Provincial Tourist Bureau Ont.:—Dept. of Travel and Pub- licity Man.:—Dept. of Industry and Commerce Sask.:—Dept. of Travel and In- formation, Tourist Branch Alta.:—Dept. of Economic Affairs, Alberta Travel Bureau B.C.:—Dept. of Recreation and Conservation, Travel Branch

Sources for Federal Data	Subject	Sources for Provincial Data
<p>Dept. of Trade and Commerce Trade Commissioner Service Commodities Branch (for exports, imports, transportation, etc.) Agriculture and Fisheries Branch Trade Publicity Branch Industrial Development Branch Information Branch International Trade Relations Branch Canadian Government Exhibition Commission Export Credits Insurance Corporation Standards Branch (weights and measures) International Economic and Technical Co-operation Division (Colombo Plan) Dept. of Secretary of State Companies Division National Film Board (films, filmstrips, photographs, for exhibition publicity purposes) Dominion Bureau of Statistics</p>	TRADE	<p>For incorporation of companies under provincial law, address Provincial Secretaries except B.C., where Attorney-General's Department is the authority. Nfld.—Dept. of Economic Development P.E.I.—Dept. of Industry and Natural Resources N.S., B.C.—Depts. of Trade and Industry N.B.—Dept. of Industry and Development Que.—Dept. of Trade and Commerce Ont.—Dept. of Planning and Development, Trade and Industry Branch Man.—Dept. of Industry and Commerce Sask.—Dept. of Co-operation and Co-operative Development, Trade and Business Information Services Saskatchewan Marketing Services Industrial Development Office Alta.—Dept. of Industries and Labour Dept. of Economic Affairs</p>
<p>Dept. of Secretary of State Bureau for Translations</p>	TRANSLATION	
<p>Dept. of National Defence, Directorate of Public Relations (Army) (for maintenance of Alaska Highway) Dept. of Public Works (Trans-Canada Highway, roads and bridges in National Parks and international and inter-provincial bridges) Development Engineering Branch and Information Services Dept. of Northern Affairs and National Resources National Parks Branch (for highways in National Parks) Board of Transport Commissioners (regulations re construction and operation of railways; construction and protection of highway crossings; rates of railways, express companies and certain inland water carriers; rates with respect to communications, international bridges and tunnels; issuing of licences to certain inland water carriers; regulations re construction of oil and gas pipelines; statistics) Air Transport Board (regulation of commercial air services) Dept. of Transport (railways, civil aviation, marine services, steamship inspection, canals, etc.) Canadian Maritime Commission National Harbours Board St. Lawrence Seaway Authority Trans-Canada Air Lines Northern Transportation Company Limited Dept. of National Health and Welfare Civil Aviation Medicine Division Dept. of Trade and Commerce Transportation and Trade Services Division National Film Board (films, filmstrips, photographs) Dominion Bureau of Statistics</p>	TRANSPORTATION	<p>Nfld.—Dept. of Highways P.E.I.—Dept. of Public Works and Highways N.S.—Dept. of Highways and Public Works N.B.—Dept. of Public Works Highways Branch Que.—Dept. of Roads, Transportation Board Ont.—Dept. of Highways, Ontario Northland Transportation Commission Man.—Dept. of Public Works Highways Branch Dept. of Mines and Natural Resources Dept. of Public Utilities Dept. of Industry and Commerce Sask.—Dept. of Highways and Transportation Saskatchewan Transportation Company Alta.—Dept. of Railways and Telephones Dept. of Highways, Highway Traffic Board B.C.—Dept. of Railways Public Utility Commission Dept. of Public Works Bureau of Economics and Statistics</p>

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	<div>TRUST AND LOAN COMPANIES</div> <div>See "Banking"</div>	
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Dept. of National Health and Welfare	<div>UNEMPLOYMENT ASSISTANCE</div>	Nfld., P.E.I., Man., Sask., B.C.:—Dept. of Public Welfare N.B.:—Dept. of Municipal Affairs
Dept. of Veterans Affairs (general information, rehabilitation, welfare, training, treatment, land settlement, gratuities, re-establishment credit, education of children of war dead, insurance, business and professional loans, records of service, war graves and medals) Canadian Pension Commission (The Pension Act) War Veterans Allowance Board (The War Veterans Allowance Act) Dept. of Labour (unemployment insurance and war veteran allowances, reinstatement, vocational training) Dept. of Finance (veterans business and professional loans) Dept. of Citizenship and Immigration Indian Affairs Branch (for Indian veterans)	<div>VETERANS AFFAIRS</div>	P.E.I.:—Provincial Secretary N.S.:—Dept. of Public Welfare N.B.:—Dept. of Health and Social Services Que.:—Dept. of Social Welfare and Youth Ont.:—Dept. of Public Welfare, Soldiers Aid Commission Sask.:—Dept. of Social Welfare, Rehabilitation Division Alta.:—Veterans Welfare Advisory Commission B.C.:—Dept. of Provincial Secretary
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PART II.—SPECIAL MATERIAL PUBLISHED IN FORMER EDITIONS OF THE CANADA YEAR BOOK

It is not possible to include in any single edition of the Year Book all articles and descriptive text of previous editions. Therefore the following list has been compiled as an index to such miscellaneous material and special articles as are not repeated in the present edition. This list links up the 1957-58 Year Book with its predecessors in respect of matters that have not been subject to wide change. Those Sections of Chapters, such as "Population", which are automatically revived when later census material is made available and to which adequate references are made in the text, are not listed unless they are in the nature of special contributions. The latest published article on each subject is shown, except when an earlier article includes material not repeated in the later one. When an article covers more than one subject it is listed under each appropriate heading.

The articles marked with an asterisk (*) are available in reprint form from the Information Services Division, Dominion Bureau of Statistics, at the price quoted.

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The Development of Aviation in Canada....	J. A. WILSON.	1938	710-712
The Trans-Canada Airway.....	J. A. WILSON.	1938	713-715
Pre-War Civil Aviation and the Defence Program.....	J. A. WILSON.	1941	608-612
Wartime Control of Transportation.....	—	1943-44	567-575
International Air Conferences.....	—	1945	642-644
The Wartime Role of the Steam Railways of Canada.....	C. P. EDWARDS, O.B.E.	1945	648-651
Canada's Northern Airfields.....	A. D. MCLEAN.	1945	705-712
The Trans-Canada Highway.....	—	1951	631-634
*International Civil Aviation Organization and Canada's Participation Therein (10 cts.)...	BRIGADIER C. S. BOOTH.	1952-53	820-827
Canals of the St. Lawrence Waterway.....	—	1954	830-833
*History of the Canadian National Railways (10 cts.).....	—	1955	840-851
*The St. Lawrence Seaway (10 cts.).....	—	1955	885-888
Traffic on The Great Lakes-St. Lawrence Seaway.....	—	1956	821-829

PART III.—REGISTER OF OFFICIAL APPOINTMENTS

The following list of official appointments continues up to Feb. 28, 1958, the list published in the 1956 Year Book at pp. 1219-1228.

Governor General's Staff.—1957. *June 11*, Lt.-Col. G. R. Whiston, M.B.E.: to be Honorary Aide-de-Camp. *June 29*, The following persons to be Deputies of His Excellency the Administrator of the Government of Canada: Hon. Robert Taschereau, Puisne Judge of the Supreme Court of Canada; Hon. Charles Holland Locke, Puisne Judge of the Supreme Court of Canada; Hon. Gerald Fauteux, Puisne Judge of the Supreme Court of Canada; Hon. Douglas Charles Abbott, Puisne Judge of the Supreme Court of Canada; Joseph François Delaute. *Nov. 12*, A/Lt.-Col. G. G. Aldous, M.C.; to be Honorary Aide-de-Camp. *Dec. 17*, A/Lt.-Col. R. C. Rutherford, M.B.E., C.D.: to be Honorary Aide-de-Camp.

Queen's Honorary Physician.—1957. *July 30*, Brigadier K. A. Hunter, O.B.E., C.D., M.D., Canadian Joint Staff, Co-ordinator of Medical Services, Department of National Defence: to be Queen's Honorary Physician for a period of two years.

Lieutenant-Governors.—1957. *Nov. 21*, Dr. William Joseph Parnell MacMillan: to be Lieutenant-Governor of the Province of Prince Edward Island, effective Dec. 16, 1957.* Campbell L. Macpherson: to be Lieutenant-Governor of the Province of Newfoundland, effective Dec. 16, 1957. *Nov. 28*, Mr. Justice John Keiller Mackay: to be Lieutenant-Governor of the Province of Ontario, effective Dec. 30, 1957. *Dec. 13*, Major-General Edward Chester Plow, C.B.E., D.S.O., C.D.: to be Lieutenant-Governor of the Province of Nova Scotia, effective Jan. 15, 1958. **1958.** *Jan. 27*, Frank Lindsay Bastedo Q.C.: to be Lieutenant-Governor of the Province of Saskatchewan, effective Feb. 3, 1958. Frederick Walter Hyndman: to be Lieutenant-Governor of the Province of Prince Edward Island, effective Mar. 31, 1958. *Jan. 29*, Onésime Gagnon: to be Lieutenant-Governor of the Province of Quebec, effective Feb. 14, 1958.

Queen's Privy Council.—1958. See p. 45 and Appendix.

Cabinet Ministers.—1958. See p. 44 and Appendix.

Senators.—1957. *Jan. 3*, William Albert Boucher: to be a Member of the Senate and a Senator for the Province of Saskatchewan. Austin Claude Taylor: to be a Member of the Senate and a Senator for the Province of New Brunswick. Sydney John Smith: to be a Member of the Senate and a Senator for the Province of British Columbia. Henri-Charles Bois: to be a Member of the Senate and a Senator for the Province of Quebec. *Apr. 25*, J. Eugène Lefrançois: to be a Member of the Senate and a Senator for the Province of Quebec. *Sept. 20*, George Stanley White, Q.C.: to be a Member of the Senate and a Senator for the Province of Ontario. *Oct. 4*, Mark-Robert Drouin, Q.C.: to be a Member of the Senate and a Senator for the Province of Quebec. *Oct. 12*, Clarence V. Emerson: to be a Member of the Senate and a Senator for the Province of New Brunswick. Dr. Joseph A. Sullivan and William Ralph Brunt, Q.C.: to be Members of the Senate and Senators for the Province of Ontario. Arthur M. Pearson: to be a Member of the Senate and a Senator for the Province of Saskatchewan. Léon Methot, Q.C. and Gustave Monette, Q.C.: to be Members of the Senate and Senators for the Province of Quebec. **1958.** *Jan. 7*, John Joseph Macdonald, D.C.M.: to be a Member of the Senate and a Senator for the Province of Prince Edward Island. *Jan. 29*, Gunnar S. Thorvaldson: to be a Member of the Senate and a Senator for the Province of Manitoba. *Jan. 31*, James Gladstone, a Treaty Indian of the Blood Reserve of Cardston, Alta.: to be a Member of the Senate and a Senator for the Province of Alberta. *Jan. 31*, Lionel Choquette: to be a Member of the Senate and a Senator for the Province of Ontario.

Speaker of the Senate.—1957. *Oct. 4*, Hon. Mark Drouin, a Member of the Senate: to be Speaker of the Senate.

Deputy Ministers.—1957. *Feb. 28*, Mitchell William Sharp, Associate Deputy Minister of Trade and Commerce: to be Deputy Minister of Trade and Commerce, effective Aug. 1, 1957. *Apr. 15*, Wilbur Roy Jakkett, Q.C., Assistant Deputy Minister of Justice: to be Deputy Minister of Justice and Deputy Attorney General of Canada, effective May 1, 1957. *Sept. 24*, George Andrew Boyle: to be Deputy Postmaster General, effective Dec. 1, 1957.

Parliamentary Assistants.—1957. *Aug. 7*, John Alpheus Charlton, M.P.: to be Parliamentary Assistant to the Minister of Agriculture. Arthur Maloney, M.P.: to be Parliamentary Assistant to the Minister of Labour. G. Ernest Halpenny, M.P.: to be Parliamentary Assistant to the Minister of National Health and Welfare. Raymond O'Hurley, M.P.: to be Parliamentary Assistant to the Minister of Mines and Technical

*Dr. W. J. P. MacMillan died Dec. 7. 1957.

Surveys. Marcel Lambert, M.P.: to be Parliamentary Assistant to the Minister of National Defence. Thomas M. Bell, M.P. to be Parliamentary Assistant to the Minister of Trade and Commerce. Angus R. Macdonald, M.P.: to be Parliamentary Assistant to the Minister of Transport. Clayton W. Hodgson, M.P.: to be Parliamentary Assistant to the Minister of Public Works. *Aug. 19*, Wallace Bickford Nesbitt, M.P.: to be Parliamentary Assistant to the Prime Minister. Walter Dinsdale, M.P.: to be Parliamentary Assistant to the Minister of Veterans Affairs. David J. Walker, M.P.: to be Parliamentary Assistant to the Minister of Justice. Richard A. Bell, M.P.: to be Parliamentary Assistant to the Minister of Finance. *Nov. 6*, John Borden Hamilton, M.P.: to be Parliamentary Assistant to the Minister of Citizenship and Immigration. **1958.** *Jan. 10*, Wallace Bickford Nesbitt, M.P.: to be Parliamentary Assistant to the Secretary of State for External Affairs.

Diplomatic Appointments.—1957. *Jan. 10*, James Scott MacDonald: to be Ambassador Extraordinary and Plenipotentiary of Canada to Austria. George Ignatieff: to be Ambassador Extraordinary and Plenipotentiary of Canada to Yugoslavia. Max Hirsch Wershof: to be Permanent Representative of Canada to the European Office of the United Nations, Geneva. Hector Allard: to be Ambassador Extraordinary and Plenipotentiary of Canada to Cuba and concurrently Ambassador Extraordinary and Plenipotentiary of Canada to the Dominican Republic and Ambassador Extraordinary and Plenipotentiary of Canada to Haiti. William Arthur Irwin: to be Ambassador Extraordinary and Plenipotentiary of Canada to Brazil. Philippe Panneton: to be Ambassador Extraordinary and Plenipotentiary of Canada to Portugal. *Jan. 17*, Robert Arthur Douglass Ford: to be Ambassador Extraordinary and Plenipotentiary of Canada to Colombia. Terrence William Leighton MacDermot: to be High Commissioner for Canada to Australia. *Mar. 7*, Chester Alvin Ronning: to be High Commissioner for Canada to India. *Apr. 4*, Norman Alexander Robertson: to be Ambassador Extraordinary and Plenipotentiary of Canada to the United States. William Frederick Bull: to be Ambassador Extraordinary and Plenipotentiary of Canada to Japan. *Apr. 15*, Edgar D'Arcy McGreer: to be Ambassador Extraordinary and Plenipotentiary of Canada to Greece and concurrently Ambassador Extraordinary and Plenipotentiary of Canada to Israel. Edmond Turcotte: to be Ambassador Extraordinary and Plenipotentiary of Canada to Switzerland. Herbert Owen Moran: to be High Commissioner for Canada to Pakistan. *June 13*, Ronald MacAlister Macdonnell: to be Ambassador Extraordinary and Plenipotentiary of Canada to Egypt and concurrently Minister Extraordinary and Plenipotentiary of Canada to Lebanon. Evan William Thistle Gill: to be High Commissioner for Canada to Ghana. *June 24*, Hon. George Alexander Drew: to be High Commissioner for Canada to the United Kingdom. *Nov. 22*, Robert Alexander MacKay: to be Ambassador of Canada to Norway and Minister of Iceland. Escott Meredith Reid: to be Ambassador of Canada to Germany. Charles Stewart Almon Ritchie: to be Permanent Delegate of Canada to the United Nations, with the rank of Ambassador. *Dec. 13*, Arthur Redpath Menzies: to be High Commissioner for Canada to the Federation of Malaya. Evan Benjamin Rogers: to be Ambassador Extraordinary and Plenipotentiary of Canada to Turkey. *Dec. 13*, Nik Cavell: to be High Commissioner for Canada to Ceylon. George Robert Cawdron Heasman: to be High Commissioner for Canada to New Zealand. James Joseph Hurley: to be High Commissioner for Canada to the Union of South Africa.

Judicial Appointments

Higher Courts.—1956. *Aug. 15*, L. P. Lizotte, Q.C.: to be a Puisne Judge of the Superior Court for the District of Quebec in the Province of Quebec, effective Sept. 1, 1956. Ignace Deslauriers, Q.C.: to be a Puisne Judge of the Superior Court for the District of Montreal in the Province of Quebec. *Aug. 29*, Arthur L. Thurlow, Q.C.: to be a Puisne Judge of the Exchequer Court of Canada. Alan Burnside Harvey, Q.C.: to be Deputy Registrar of the Supreme Court of Canada, effective Oct. 1, 1956. *Sept. 13*, Hon. Arthur Mahoney LeBel: to be a Member of the Court of Appeal for Ontario and *ex officio* a Member of the High Court of Justice for Ontario, effective Oct. 10, 1956. Leo A. Landreville, Q.C.: to be a Judge of the Supreme Court of Ontario and a Member of the High

Court of Justice for Ontario, and *ex officio* a Member of the Court of Appeal for Ontario, effective Oct. 10, 1956. *Oct. 11*, Victor Pager, Q.C.: to be a Puisne Judge of the Superior Court for the District of Montreal, in the Province of Quebec, effective Nov. 15, 1956. *Oct. 31*, Jean-Louis Marchand: to be a Puisne Judge of the Superior Court for the District of Three Rivers, in the Province of Quebec. *Nov. 14*, Hon. Fernand-Léopold Choquette, a Puisne Judge of the Superior Court for the District of Quebec in the Province of Quebec: to be a Puisne Judge of the Court of Queen's Bench in and for the Province of Quebec. Paul Lesage, Q.C.: to be a Puisne Judge of the Superior Court for the District of Quebec, in the Province of Quebec. **1957.** *Jan. 3*, H. Allan MacLean, Q.C.: to be a Judge of the Supreme Court of British Columbia, effective Feb. 1, 1957. *Jan. 17*, Hon. Clinton James Ford, a Judge of the Appellate Division of the Supreme Court of Alberta: to be Chief Justice of the Supreme Court of Alberta, with the style and title of Chief Justice of Alberta, and *ex officio* a Judge of the Trial Division of the said Court. Hon. Hugh John Macdonald, a Judge of the Trial Division of the Supreme Court of Alberta: to be a Judge of the Appellate Division of the said Court, and *ex officio* a Judge of the Trial Division of the said Court. Hon. J. Boyd McBride, a Judge of the Trial Division of the Supreme Court of Alberta: to be a Judge of the Appellate Division of the said Court and *ex officio* a Judge of the Trial Division of the said Court. His Honour Peter Greschuk, a Judge of the District Court of the District of Northern Alberta: to be a Judge of the Trial Division of the Supreme Court of Alberta, and *ex officio* a Judge of the Appellate Division of the said Court. H. W. Riley, Q.C.: to be a Judge of the Trial Division of the Supreme Court of Alberta, and *ex officio* a Judge of the Appellate Division of the said Court. *Feb. 21*, Alfred S. Marriott, Q.C.: to be a Surrogate Judge in Admiralty of the Exchequer Court of Canada for the Ontario Admiralty District. *Feb. 22*, George H. Montgomery, Q.C.: to be a Puisne Judge of the Court of Queen's Bench in and for the Province of Quebec. *Apr. 18*, Hon. George Eric Tritschler: to be a Judge of the Court of Appeal for Manitoba, and *ex officio* a Judge of the Court of Queen's Bench for Manitoba. A. M. Monnin, Barrister-at-Law: to be a Judge of the Court of Queen's Bench for Manitoba. *Oct. 1*, Emmett Matthew Hall, Q.C.: to be Chief Justice of Her Majesty's Court of Queen's Bench for Saskatchewan. *Oct. 25*, K. G. Morden, Q.C.: to be a Judge of the Supreme Court of Ontario and a Member of the Court of Appeal and *ex officio* a Member of the High Court of Justice for Ontario. *Nov. 7*, Frédéric Dorion, Q.C.: to be a Puisne Judge of the Superior Court for the District of Quebec in the Province of Quebec. Jean St-Germain, Q.C.: to be a Puisne Judge of the Superior Court for the District of Montreal in the Province of Quebec. *Dec. 13*, J.-Achille Joli-coeur, Q.C.: to be a Puisne Judge of the Superior Court for the District of Quebec. George A. McGillivray, Q.C.: to be a Judge of the Supreme Court of Ontario and a Member of the Court of Appeal for Ontario, and *ex officio* a Member of the High Court of Justice for Ontario. *Dec. 23*, Gaétan Sylvestre, Q.C.: to be a Puisne Judge of the Superior Court for the District of Montreal, in the Province of Quebec. **1958.** *Jan. 13*, Hugh C. Farthing, Q.C.: to be a Judge of the District Court of the District of Southern Alberta and a Local Judge of the Supreme Court of Alberta, effective Feb. 1, 1958. *Jan. 15*, Ronald Martland, Q.C.: to be a Puisne Judge of the Supreme Court of Canada. *Jan. 24*, Antoine Lacourcière, Q.C.: to be a Puisne Judge of the Superior Court for the District of Quebec in the Province of Quebec. *Jan. 28*, Franklin Kay Collins: to be a Judge of the Supreme Court of British Columbia. Alan Burnside Harvey, Q.C., Deputy Registrar of the Supreme Court of Canada: to be Registrar of the Supreme Court of Canada, effective Jan. 28, 1958. *Jan. 31*, Dana Harris Porter, Q.C.: to be a Judge of the Supreme Court of Ontario and Chief Justice of the Court of Appeal for Ontario, with the style and title of Chief Justice of Ontario, and *ex officio* a Member of the High Court of Justice for Ontario. *Feb. 5*, Hon. Wilfred Judson, a Judge of the Supreme Court of Ontario and a Member of the High Court of Justice for Ontario: to be a Puisne Judge of the Supreme Court of Canada. *Feb. 7*, Hon. Emmett Matthew Hall, Chief Justice of the Court of Queen's Bench for Saskatchewan: to be the Judge of the Appeal Court constituted by the Farmers' Creditors Arrangement Act for the Province of Saskatchewan.

County and District Courts.—1956. *Sept. 13*, Peter S. MacKenzie: to be a Judge of the County Court for the County of Bruce in the Province of Ontario and also a Local Judge of the High Court of Justice for Ontario. *Sept. 20*, Lawrence Hudson Phinney, Police Magistrate in and for the Northwest Territories: to act as Juvenile Court Judge for that part of the Northwest Territories lying North of the Arctic Circle. *Nov. 22*, William Austin Molloy: to be a Judge of the County Court of the Eastern Judicial District in the Province of Manitoba, effective Dec. 1, 1956. 1957. *Jan. 17*, John E. Friesen: to be Judge of the District Court of the Judicial District of Shaunavon, in the Province of Saskatchewan. *Jan. 31*, John Edward Gibben: to be a Police Magistrate in and for the Yukon Territory. *Feb. 7*, John Howard Sissons, Judge of the Territorial Court of the Northwest Territories and Deputy Judge of the Territorial Court of the Yukon Territory to act as Juvenile Court Judge for that part of the Yukon Territory lying to the North of the Arctic Circle. *Feb. 28*, His Honour Reginald D. Keirstead, Judge of the County Court for the City and County of Saint John, N.B.: to be Deputy Judge of the Admiralty District for the Province of New Brunswick. *Apr. 15*, Colin E. Bennett, Q.C.: to be Judge of the County Court of the County of Grey, in the Province of Ontario and also a Local Judge of the High Court of Justice for Ontario. *Apr. 18*, John R. Solomon, Barrister-at-Law: to be a Judge of the County Court of the Eastern Judicial District in the Province of Manitoba, effective June 1, 1957. *Apr. 25*, Arthur Charles Lewer Adams, Police Magistrate in and for the Yukon Territory: to act as a Juvenile Court Judge in that part of the Mining District of Dawson and Mayo in the Yukon Territory lying south of the Sixty-sixth Parallel of North Latitude and in the area known as the Mining District of Whitehorse in the Yukon Territory. *May 27*, J. D. McCallum, Barrister-at-Law: to be Junior Judge of the County Court of the County of Middlesex, in the Province of Ontario and also a Local Judge of the High Court of Justice for Ontario, effective June 15, 1957. *Sept. 24*, Gordon Lindsay, Q.C.: to be a Judge of the County Court of Yale in the Province of British Columbia and a Local Judge of the Supreme Court of British Columbia. Laurance Yeomans Cairns, Q.C.: to be a Judge of the District Court of the District of Northern Alberta in the said Province and a Local Judge of the Supreme Court of Alberta. Herbert E. Keown, Q.C.: to be Judge of the District Court of the Judicial District of Swift Current in the Province of Saskatchewan. *Nov. 7*, R. A. Carscallen, Q.C.: to be Judge of the County Court of the County of Lambton in the Province of Ontario, and also a Local Judge of the High Court of Justice for Ontario. *Dec. 23*, Harold W. Timmins, Q.C.: to be a Junior Judge of the County Court of the County of York, in the Province of Ontario, effective Jan. 1, 1958. 1958. *Jan. 13*, Ralph H. Shaw, Barrister-at-Law: to be Judge of the County Court of District Number Four in the Province of Nova Scotia. *Jan. 17*, Maxwell W. Strange, Q.C.: to be a Judge of the County Court of the County of Frontenac in the Province of Ontario and a Local Judge of the High Court of Justice for Ontario. Richard W. Reville, Q.C.: to be Judge of the County Court of the County of Brant in the Province of Ontario and a Local Judge of the High Court of Justice for Ontario. *Jan. 28*, Stanley J. Remnant, Q.C.: to be a Judge of the County Court of Vancouver in the Province of British Columbia and a Local Judge of the Supreme Court of British Columbia. *Jan. 31*, William Arthur Schultz, Q.C.: to be Judge of the County Court of Prince Rupert in the Province of British Columbia and to be a Local Judge of the Supreme Court of British Columbia.

Courts under Canadian Citizenship Act.—1956. *July 12*, The following persons are designated to act as Courts for the purposes of the Canadian Citizenship Act: Inspector Joseph John Atherton, Officer Commanding, Prince Albert Sub-division, Royal Canadian Mounted Police, Prince Albert, Sask.; Corporal Harry MacBeth Mann, Royal Canadian Mounted Police Detachment, Uranium City, Sask.; Constable William Kenneth Williams, Royal Canadian Mounted Police Detachment, Fort McMurray, Alta.; and William Carysfort Proby, Stipendiary Magistrate, Ocean Falls, B.C. *Sept. 27*, Lieut.-Col. Gérard-Adolphe-Maxime Nantel, Assistant Judge Advocate General, Canadian Joint Staff, London, England; Major Clarence Howard Johnson, Deputy Judge Advocate, Canadian Infantry Brigade, Soest, Germany; and Lieutenant-Commander Herbert Galt Oliver,

Deputy Judge Advocate, Air Division Headquarters, RCAF, Metz, France: to act as Courts for the purpose of dealing with applications under the Canadian Citizenship Act made by persons serving in the Armed Forces of Canada outside of Canada. *Oct. 3*, Aubrey Fisher, Stipendiary Magistrate, Fort Nelson, B.C.; Constable Alexander William Wieshlow, Royal Canadian Mounted Police Detachment, Port Alice, B.C.; Constable Max Harte, Royal Canadian Mounted Police Detachment, Cassiar, B.C.; and Corporal David Gordon Kennedy, Royal Canadian Mounted Police Detachment, Fort Chipewyan, Alta.: to act as Courts for the purposes of the Canadian Citizenship Act. *Oct. 25*, J. Colin A. Campbell, Q.C., Chairman of the Immigration Appeal Boards: to act as a Court from Nov. 1, 1956. *Dec. 28*, Kenneth Lockhart MacKenzie (Jurisdiction, Province of Ontario), Ross McCormick Winter (Jurisdiction, Province of Ontario), and J.-Darius Robitaille (Jurisdiction, Province of Quebec): to act, as and from Jan. 1, 1957, as Courts for the purposes of the Canadian Citizenship Act. *1957. Jan. 17*, Vernon Ulysses Miner, Q.C.—(Jurisdiction, Provinces of Alberta and Saskatchewan); Archibald Frederick Flucke, Northern Affairs Officer, Frobisher Bay, N.W.T. (Jurisdiction, Northwest Territories); Corporal Edward Evan Jones, Royal Canadian Mounted Police Detachment, Cambridge Bay, N.W.T. (Jurisdiction, Northwest Territories); Corporal Hughes Douglas Ferguson, Royal Canadian Mounted Police Detachment, Mayo, Yukon Territory (Jurisdiction, Yukon Territory); Constable James Gladman Vincent, Royal Canadian Mounted Police Detachment, Dawson, Yukon Territory (Jurisdiction, Yukon Territory); Constable Wayne Howard Canam, Royal Canadian Mounted Police Detachment, Great Whale River, Quebec (Jurisdiction, Province of Quebec): to act as Courts. *Apr. 4*, Magistrate Clement P. Scott, St. Anthony, Nfld.; Magistrate Edward Walter Kenrick, Kirkland Lake, Ont.; Paul Ethelbert Trussler, Geraldton, Ont.; Corporal Gordon Clifton Barr, Royal Canadian Mounted Police Detachment, Pangnirtung, N.W.T.; and Constable Joseph-Jean-Romeo-Georges Coulombe, Royal Canadian Mounted Police Detachment, Sept-Îles, Que.: to act as a Court. *June 20*, Sub-Inspector Albert Huget, Royal Canadian Mounted Police Detachment, Aklavik, Yukon Territory; Constable Steve Pentelulik, Royal Canadian Mounted Police Detachment, Mayo, Yukon Territory; Constable Carl Walter Smith, Royal Canadian Mounted Police Detachment, Ile a la Crosse, Sask.; Constable Vernon George Smith, Royal Canadian Mounted Police Detachment, Fort Vermilion, Alta.: to act as Courts. *Aug. 16*, Sub-Inspector John Stewart Craig, Royal Canadian Mounted Police Detachment, Fort Smith, N.W.T.; Corporal Joseph Laurie Belliveau, Royal Canadian Mounted Police Detachment, Sept-Îles, Que.; Constable Ian Russell Smith, Royal Canadian Mounted Police Detachment, Port Alice, B.C.; Squadron Leader Terence Reid Giles, Deputy Judge Advocate, No. 1 Air Division, Metz, France; Major Frederick Ronald Bickell, Deputy Judge Advocate, Canadian Infantry Brigade, Soest, Germany: to act as Courts. *Sept. 12*, Corporal Charles-Auguste-Leo Liboiron, Royal Canadian Mounted Police Detachment, Roberval, Que.; Corporal William Arthur Fieldsend, Royal Canadian Mounted Police Detachment, Snow Lake, Man.; James Jameson Bond, Northern Affairs Officer, Cambridge Bay, N.W.T.: to act as Courts. *Oct. 26*, Constable Robert Winston Hobson, Royal Canadian Mounted Police Detachment, Tahsis, B.C.; Constable John Hugh Wilson, Royal Canadian Mounted Police Detachment, Great Whale River, Que.; Corporal Robert Neil Milmine, Royal Canadian Mounted Police Detachment, Cambridge Bay, Northwest Territories; and Magistrate Marcel Léger, Office of the District Magistrate, Cochrane, Ont.: to act as Courts.

Miscellaneous

1956. July 19, Hon. Gordon McGregor Sloan: to be until Mar. 31, 1957, the Administrator of the Government of the Province of British Columbia whenever the Lieutenant-Governor is unable to execute his office and functions by reason of absence, illness or other inability. *Aug. 29*, A. G. Stanley: to be Inspector of Machinery of Steamships at Halifax, N.S., pursuant to Sect. 376 of the Canada Shipping Act. The following persons to be, pursuant to Sect. 497 of the Canada Shipping Act, receivers of wrecks for districts

in the Province of Nova Scotia: District No. 1—J. T. Burns, Office of the District Marine Agent, Halifax, N.S.; District No. 2—Major W. A. Leask, Harbour Master, Beaver Harbour, Halifax County, N.S.; District No. 3—R. E. Jamieson, Canso, N.S.; District No. 6—T. M. Allan, Box 32, Pugwash, N.S.; District No. 8—P. A. Sanford, Harbour Master, Walton, Hants County, N.S.; District No. 9—Captain R. C. Hall, Keeper, Margaretsville Light, Margaretsville, Annapolis County, N.S.; District No. 10—C. F. McBride, Sr., Wharfinger, Box 264, Digby, N.S.; District No. 11—Captain George L. Coggins, Harbour Master, Weymouth, N.S.; District No. 12—Patrick J. Murphy, Yarmouth, N.S.; District No. 13—Edward C. Crowell, Port LaTour, N.S.; District No. 14—Richard William Mulhall, Harbour Master, Liverpool, N.S.; District No. 16—A. Victor Kyte, Mulgrave, N.S.; District No. 17—Captain E. R. Huntington, Harbour Master, P.O. Box 558, Sydney, N.S.; District No. 18—John H. MacInnis, R.R. No. 1, Port Hood, Inverness County, N.S.

Sept. 13, Hon. James Chalmers McCruer, Chief Justice of the High Court of Justice of Ontario: to be during pleasure the Administrator of the Government of Ontario whenever the Lieutenant-Governor of Ontario is unable to execute his office and functions by reason of absence, illness, or other inability. *Sept. 27*, Roy Forsythe Purdie and Robert S. Torrance: to be Inspectors of Hulls and Equipment of Steamships. *Nov. 22*, James Albert Smith: to be an Inspector of Hulls and Equipment of Steamships at Ottawa, Ont., pursuant to the Canada Shipping Act. *Nov. 29*, Gerald-Armand Beaudoin, Donald Henry Christie, Alban Garon, Gilbert Thomas Gregory, Bernard Charles Hofley, Hilton Alexander McIntosh, Charles Robert Orrock Munro, Ellis Richmond Olson and Francis Frederick Gallant: to be Commissioners *per dedimus potestatem* to take oaths for use in the Supreme and Exchequer Courts of Canada. **1957.** *Jan. 17*, Mrs. Rolande-Andrée-Camille Rouen, an employee of the Royal Canadian Mounted Police Crime Detection Laboratory: to be a duly qualified analyst pursuant to the Opium and Narcotic Drug Act. *Jan. 22*, Hon. Marshall Menzies Porter and Hon. Horace Gilchrist Johnson, Judges of the Appellate Division of the Supreme Court of Alberta, and Hon. Philip Neil Primrose, Hon. Peter Greschuk and Hon. Harold William Riley, Judges of the Trial Division of the said Court: to be Commissioners to take oaths in the Province of Alberta. *Feb. 7*, Hon. Clinton James Ford, Chief Justice of Alberta: to be during pleasure the Administrator of the Government of the said Province of Alberta whenever the Lieutenant-Governor is unable to execute his office and functions by reason of absence, illness or other inability. *Feb. 28*, Barrie Montgomery Strang: to be Inspector of Machinery and of Hulls and Equipment of Steamships at the Port of St. John's, Nfld., effective Feb. 1, 1957. *Mar. 7*, William Hugh Masson Wardrope, Assistant Chief Commissioner, Board of Transport Commissioners for Canada: to be one of Her Majesty's Counsel learned in the law. *Mar. 14*, Hon. Gordon McGregor Sloan, Chief Justice of British Columbia: to be again from Apr. 1, 1957, until Mar. 31, 1958, both dates inclusive, the Administrator of the Government of the Province of British Columbia whenever the Lieutenant-Governor is unable to execute his office and functions by reason of absence, illness or other inability. *Apr. 18*, Guy Roberge: to be Government Film Commissioner, for a period of five years, effective May 1, 1957. *Apr. 25*, Guy Roberge: to be one of Her Majesty's Counsel learned in the law. *July 25*, Hon. Jacques Dumoulin and Hon. Arthur Louis Thurlow, Puisne Judges of the Exchequer Court of Canada; Hon. Frederick Anderson Sheppard, Court of Appeal for British Columbia; Hon. Sherwood Lett, Chief Justice, and Hon. Harold Walker McInnes, Hon. Arthur Edward Lord, Hon. Harry Joseph Sullivan, Hon. Thomas Wilfrid Brown, Hon. John Graham Ruttan and Hon. Hugh Alan Maclean, Supreme Court of British Columbia; Hon. Ivan Schultz, Court of Appeal for Manitoba; Hon. Alfred Maurice Monnin, Court of Queen's Bench for Manitoba; Hon. John Babbitt McNair, Chief Justice of New Brunswick, and Hon. Louis McCoskery Ritchie, Appeal Division of the Supreme Court of New Brunswick; Hon. Charles Jordan Jones, Queen's Bench Division of the Supreme Court of New Brunswick; Hon. John Howard Sissons, Territorial Court of the Northwest Territories; Hon. Léo-Albert Landreville, Supreme Court of Ontario and the High Court of Justice for Ontario; Hon. Jean Martineau, Hon. André Taschereau, Hon. George Robert Whitley Owen, Hon. George Hugh Montgomery, Court of Queen's Bench for Quebec; Hon. Georges François Reid, Hon. William Morin, Hon. Charles-A. Sylvestre,

Hon. Roger Ouimet, Hon. Jean-Pierre Charbonneau, Hon. Ignace-Joseph Deslauriers, Hon. Louis-Philippe Lizotte, Hon. Jean-Louis Marchand, Hon. Paul Lesage and Hon. Victor Payer, Court of Queen's Bench for Quebec: to be Commissioners *per dedimus potestatem* to administer oaths in Canada or in the province or territory for which such judges were appointed. *Oct. 3*, Alfred Frederick Lambert: to be International Boundary Commissioner, *vice* J. E. R. Ross, resigned. *Oct. 10*, Hon. Sir Brian Edward Spencer Dunfield, Kt., a Judge of the Supreme Court of Newfoundland: to be the Administrator of the Government of the Province of Newfoundland from *Oct. 10* to *Oct. 20*, 1957, both dates inclusive. *Oct. 22*, Hon. Sir Brian Edward Spencer Dunfield, Kt., a Judge of the Supreme Court of Newfoundland: to be again the Administrator of the Government of the Province of Newfoundland for a further period from *Oct. 21*, 1957, until the Lieutenant-Governor of Newfoundland is able to exercise the functions of Lieutenant-Governor. *Nov. 7*, Hon. Sir Albert Joseph Walsh, Kt., Chief Justice of the Province of Newfoundland: to be the Administrator of the government of the said Province of Newfoundland whenever the Lieutenant-Governor of Newfoundland is unable to execute his office and functions by reason of absence, illness or other inability, effective *Nov. 12*, 1957. **1958.** *Jan. 31*, John Bracken: to inquire into the distribution of railway box cars for the movement of grain amongst country elevators at individual shipping points in Western Canada. *Feb. 13*, Victor Martineau, Assistant Master of the Rolls: to be Official Receiver for Bankruptcy Division No. 1 of the Province of Quebec, *vice* F. G. Coffin, Q.C., resigned. *Feb. 18*, George L. Cassidy, Q.C., Chief Oscar D. Peters and Chief Vincent Harris: to be Commissioners under Part I of The Inquiries Act, to inquire into the desirability of establishing a new band of Indians composed of those Indians residing on Seabird Island in the Province of British Columbia. *Feb. 25*, Hon. Dana H. Porter, Chief Justice of Ontario: to be Administrator of the Government of Ontario whenever the Lieutenant-Governor is unable to execute his functions by reason of absence, illness or other inability.

Government Appointments to Miscellaneous Boards, Commissions, etc.

Agricultural Stabilization Board.—**1958.** *Feb. 18*, Luke W. Pearsall, S. J. Chagnon and Alexander Howard Turner: to be Members of the Board, Luke W. Pearsall to be Chairman and Alexander Howard Turner to be Vice-Chairman thereof.

Bank of Canada.—**1957.** *Jan. 7*, H. O. Patriquin: to be a Director for the period expiring *Feb. 28*, 1958, the remainder of the term of the late Arthur M. Day. *Feb. 21*, The following persons to be Directors for a term of three years commencing *Mar. 1*, 1957: W. A. Johnson, H. A. Russel, Austin A. Scales and Anselme Samoisette.

Frederick Banting Fund Account Committee.—**1956.** *Sept. 13*, The following persons to be Members: C. J. Mackenzie, President of the Atomic Energy Control Board; A. H. Zimmerman, Chairman of the Defence Research Board; K. W. Neatby, Director, Science Service, Department of Agriculture; W. J. Bennett, President of the Atomic Energy of Canada Limited; and F. T. Rosser, Director of Administration, National Research Council, to be Secretary of the Committee.

Board of Grain Commissioners.—**1956.** *Oct. 3*, Roy Wilfred Milner: to be Chief Commissioner for Canada, *vice* Donald Gordon McKenzie, effective *Dec. 10*, 1956.

Board of Transport Commissioners for Canada.—**1956.** *Nov. 20*, Clarence Day Shepard: to be a Member and Chief Commissioner of the Board, *vice* Hon. John Doherty Kearney, resigned, effective *Jan. 15*, 1957.

Buffalo and Fort Erie Public Bridge Authority.—**1957.** *Dec. 23*, Allan Lewis Brooks, Q.C., Welland, Ont.; J. George Johnston, Toronto, Ont.; Archibald L. Hayes, D.D.S., Fort Erie, Ont.; John A. MacDonald, Ottawa, Ont.; and William G. Stamp, Fort Erie, Ont., *vice* J. S. Kaymayer, John H. Gardner and John M. Teal: to be Canadian Members, effective *Jan. 1*, 1958.

Canada Council.—**1957.** *Apr. 15*, Hon. Brooke Claxton and the Very Reverend George Henri Lévesque: to be Chairman and Vice-Chairman respectively for terms of five years. Each of the following persons to be Members: Mrs. R. Reginald Arkell, two

years; Jules Bazin, two years; L. W. Brockington, two years; Samuel Bronfman, two years; Fred Emerson, two years; Eric Harvie, two years; Dr. Frank Leddy, three years; Mrs. Angus L. Macdonald, three years; Dr. N. A. MacKenzie, three years; Dr. Frank MacKinnon, three years; Dr. W. A. Macintosh, three years; Sir Ernest MacMillan, three years; Dr. Eustache Morin, four years; Miss Vida Peene, four years; John A. Russell, four years; E. P. Taylor, four years; Mrs. Alfred Paradis, Jr., four years; Major-General George P. Vanier, four years; David H. Walker, four years. Dr. A. W. Trueman: to be Director, and E. Bussière: to be Associate Director of the Canada Council. John G. Hungerford, James Muir and Graham Towers: to be Members of the Investment Committee of the Canada Council.

Canada Labour Relations Board.—1957. *July 25*, A. H. Baleh, Vice-Chairman of the National Legislative Committee, International Railway Brotherhoods, Ottawa: to be a Member as a representative of employees *vice* W. L. Best, deceased.

Canadian Broadcasting Corporation.—1956. *Nov. 29*, The following persons to be again Governors: Dr. G. Douglas Steel, for a period of three years from Nov. 1, 1956, and Kenneth G. Montgomery, for a period of three years from Jan. 1, 1957. 1957. *Dec. 1*, Dean Adrien Pouliot: to be again a Governor for a term of three years from Jan. 25, 1957.

Canadian Commercial Corporation.—1956. *Aug. 9*, Richard Golding Johnson, President, Defence Construction (1951) Limited: to be a Director, *vice* T. E. Stephenson, resigned.

Canadian Farm Loan Board.—1958. *Jan. 24*, Clément Vincent, Ste-Perpétue, Que., and Cameron McTaggart, Glencoe, Ont.: to be Members for a period of five years.

Canadian Maritime Commission.—1956. *Nov. 22*, Louis de la Chesnaye Audette: to be again a Member for a term of five years from Nov. 1, 1956, and to be again Chairman of the said Commission.

Canadian Pension Commission.—1956. *Dec. 5*, Reginald Robert Laird, M.D., C.M.: to be a Commissioner for a period of ten years from Jan. 1, 1957. 1957. *Oct. 4*, Brigadier James Learmonth Melville: to be a Commissioner and Chairman of the Commission for the period expiring the 30th day of December, 1958.

Civil Service Commission.—1957. *Jan. 17*, Miss Ruth Elizabeth Addison, Executive Assistant to the Deputy Minister of Defence Production: to be a Member, effective Feb. 1, 1957. *Mar. 14*, Arnold Danforth Patrick Heeney, Q.C., Ambassador Extraordinary and Plenipotentiary of Canada to the United States of America: to be a Member and Chairman thereof *vice* S. G. Nelson, effective May 1, 1957. Paul Pelletier, Assistant Secretary to the Cabinet: to be a Member *vice* A. J. Boudreau, effective Aug. 1, 1957.

Defence Research Board.—1957. *Mar. 28*, Dr. John Edgar Keyston, O.B.E.: to be Vice-Chairman, effective June 1, 1957. *Apr. 11*, Thomas Ingledow: to be a Member for a term of three years commencing Apr. 1, 1957. *July 16*, Dr. George Sydney Field, Chief Scientist: to be a Member for a term of three years commencing Aug. 1, 1957.

Dominion Council of Health.—1956. *Dec. 13*, John W. Bruce, O.B.E.: to be a Member. 1957. *Jan. 24*, Miss Priscilla Cameron, R.N., Administrator of the Chatham General Hospital, Chatham, Ont.: to be a Member for a further period of three years from June 1, 1957.

Dominion Statistician.—1956. *Oct. 3*, Walter Elliott Duffett: to be Dominion Statistician, effective Jan. 1, 1957.

Federal District Commission.—1956. *Dec. 13*, Mme. Cécile Fontaine and Lawrence Freiman: to be again Members for the period ending Dec. 31, 1959. *Dec. 19*, Colonel J. D. Fraser: to be again a Member for the period ending Dec. 31, 1959. 1958. *Jan. 17*, Major-General Howard Kennedy: to be a Member for a period of six months and to be Chairman of the Commission.

Historic Sites and Monuments Board of Canada.—1956. July 12, Oliver L. Vardy: to be a Member, representing the Province of Newfoundland, for a period of five years from July 10, 1956. 1957. Apr. 4, Joel K. Smith: to be a Member representing the Province of Alberta, for a period of three years from Apr. 13, 1957, *vice* M. E. LaZerte, resigned. 1958. Feb. 13, Reverend Antoine d'Eschambault, D.S.T., D.J.C.: to be Chairman of the Board, *vice* Professor Fred Landon, resigned.

Income Tax Appeal Board.—1957. May 9, Maurice Boisvert: to be a Member.

International Commission for the Northwest Atlantic Fisheries.—1957. Feb. 28, J. Howard MacKichan, General Manager, United Maritime Fishermen, Limited, Halifax, N.S.: to be again a Commissioner, for a further period of two years from Mar. 8, 1957.

International Joint Commission.—1958. Jan. 2, Donald McGregor Stephens, Chairman and General Manager of the Hydro-Electric Board for the Province of Manitoba: to be a Commissioner for a period of one year, effective Jan. 1, 1958, *vice* George Spence.

International Pacific Salmon Fisheries Commission.—1956. Sept. 20, Fred D. Mathers: to be a Member for a period of two years, effective Sept. 20, 1956, *vice* H. R. MacMillan, resigned.

International Whaling Commission.—1957. Mar. 7, George R. Clark, Deputy Minister of Fisheries: to represent the Government of Canada, *vice* Alistair Fraser.

Medical Council of Canada.—1956. Sept. 20, Dr. Neil Macdonald; Dr. Léon Gérin-Lajoie, and Dr. Joseph E. Josephson: to be Members for a term of four years, with effect from Nov. 7, 1956.

National Battlefields Commission.—1956. Dec. 19, Mostyn Lewis and R. H. Price: to be Members.

National Film Board.—1957. July 18, Charles Stein, Q.C., Under Secretary of State: to be a Member.

National Harbours Board.—1957. Dec. 23, Maurice-Georges Archer, who was appointed a Member and Vice-Chairman for a term of ten years effective July 1, 1952: to be Chairman for the balance of the said term, effective Feb. 1, 1958. 1958. Jan. 16, Robert James Rankin: to be a Member and to be Vice-Chairman effective Feb. 1, 1958.

National Library Advisory Council.—1957. Feb. 21, The following persons to be Members for a further term expiring Dec. 31, 1960: Isabel Cummings, H. Newell, and Peter Grossman. Jules Bazin: to complete the term of the late Paul Houde, expiring Dec. 31, 1957.

National Research Council.—1957. Jan. 3, Dr. F. T. Rosser: to be Vice-President (Administration), effective Feb. 1, 1957. Feb. 7, Dr. R. F. Farquharson, M.B.E., Head of the Department of Medicine, University of Toronto: to be Vice-President (Scientific), effective Apr. 1, 1957. Apr. 11, The following persons to be Members for a term of three years, from Apr. 1, 1957, to Mar. 31, 1960: Gordon G. Cushing, Executive Vice-President, Canadian Labour Congress, Ottawa, Ont.; Henry Gaudefroy, Director, École Polytechnique, Montreal, Que.; Abel Gauthier, Vice-Dean, Faculty of Science, University of Montreal, Montreal, Que.; Pierre-R. Gendron, Dean, Faculty of Science, University of Ottawa, Ottawa, Ont.; Paul-Antoine Giguère, Head of the Department of Chemistry, Laval University, Quebec, Que.; L. H. J. Shebeski, Professor of Plan Science, University of Manitoba, Winnipeg, Man.; and F. J. Toole, Head of the Department of Chemistry, and Dean of the Graduate School, University of New Brunswick, Fredericton, N.B.

Northern Ontario Pipe Line Crown Corporation.—1956. July 5, Victor G. Bartram: to be General Manager, effective July 10, 1956. Feb. 21, Jean Claude Lessard; John W. McKee and Dr. Chester S. Walters: to be Directors replacing Marc Boyer, Richard G. Johnson, and Mitchell W. Sharp, effective Mar. 1, 1957.

Northwest Territories.—1956. Dec. 28, D. M. Stewart: to be a Small Debts Official for the Northwest Territories, with Headquarters at Hay River, N.W.T. 1957. Feb. 14, E. H. Essex: to be a Small Debts Official for the Northwest Territories with Headquarters at Fort Smith, N.W.T. June 13, Wilfrid George Brown, Chief of the Territorial Division of the Department of Northern Affairs and National Resources: to be a Member of the Council of the Northwest Territories and Deputy Commissioner, *vice* F. J. C. Cunningham, effective June 18, 1957. Aug. 7, Louis de la Chesnaye Audette, Chairman, Canadian Maritime Commission; Charles Mills Drury, Executive; Hubert Murray Jones, Director of Indian Affairs Branch, Department of Citizenship and Immigration; and Leonard Hanson Nicholson, Commissioner of the Royal Canadian Mounted Police: to be Members of the Council.

Parliamentary Library.—1956. Oct. 11, Jean-Guy Sylvestre: to be Associate Parliamentary Librarian, effective Oct. 13, 1956.

St. Lawrence Seaway Authority.—1957. May 27, Charles Gavsie: to be President for the remainder of his term as a Member, effective June 1, 1957. Jean-Claude Lessard: to be a Member for a term of ten years, effective July 1, 1957. Dec. 23, Bennett J. Roberts, Chairman of the National Harbours Board: to be President for a term of eighteen months, effective Feb. 1, 1958, *vice* Charles Gasvie, resigned.

Tariff Board.—1957. Apr. 15, George Alexander Elliott: to be a Member for a period of ten years, effective Apr. 23, 1957. Apr. 25, W. W. Buchanan: to be a Vice-Chairman, for the remainder of his term as Member of the Board.

Vocational Training Advisory Council.—1956. July 26, Mrs. Rex Eaton, President, The National Council of Women of Canada: to be a Member, representing women, *vice* Mrs. A. Turner Bone, resigned. Dec. 13, The following persons to be Members and Alternate Members for the period expiring Dec. 1, 1959: Member—W. F. McMullen, Canadian Manufacturers' Association, representing employers; Alternate Member—L. M. Schram, Canadian Manufacturers' Association, representing employers, Alternate for W. F. McMullen; Member—N. S. Dowd, Canadian Labour Congress, representing organized labour; Alternate Member—A. L. Hepworth, Canadian Brotherhood of Railway Employees and other Transport Workers, representing organized labour, Alternate for N. S. Dowd; Member—E. K. Ford, Director of Vocational Education, Nova Scotia, representing the Province of Nova Scotia; Alternate Member—W. D. Mills, Assistant Director of Vocational Education, Nova Scotia, representing the Province of Nova Scotia, Alternate for E. K. Ford; Member—T. D. Anderson, Dominion Secretary, Canadian Legion, representing veterans; Alternate Member—Dr. Robert Westwater, representing veterans, Alternate for T. D. Anderson; Member—J. W. McNutt, Director of Vocational Education, New Brunswick, representing the Province of New Brunswick; Alternate Member—Dr. F. E. MacDiarmid, Director and Chief Superintendent, Department of Education, New Brunswick, representing the Province of New Brunswick, Alternate for J. W. McNutt; Member—J. A. Doyle, Director of Technical Education, Saskatchewan, representing the Province of Saskatchewan; Alternate Member—W. W. Sharp, Department of Education, Saskatchewan, representing the Province of Saskatchewan, Alternate for J. A. Doyle; Member—J. A. Ferguson, Canadian Federation of Agriculture, representing agriculture; Alternate Member—David Kirk, Secretary, Canadian Federation of Agriculture, representing agriculture, Alternate for J. A. Ferguson.

Unemployment Insurance Commission.—1956. Nov. 1, J.-G. Bisson: to be again Chief Commissioner, effective Sept. 30, 1956. Dec. 13, Robert J. Tallon: to be again a Commissioner for a term of one year, effective from Dec. 31, 1956. 1957. Hon. Mr. Justice John D. Kearney, a Judge of the Exchequer Court of Canada: to be Umpire for the purposes of the Unemployment Insurance Act, *vice* Hon. Mr. Justice J. C. A. Cameron, resigned, effective Jan. 15, 1957. Apr. 4, Clifford A. L. Murchison, Q.C.: to be again a Commissioner, for a term of five years effective June 1, 1957.

PART IV.—FEDERAL LEGISLATION 1956-57

This classified list of federal legislation has been compiled from the Statutes. Naturally in summarizing material of this kind it is not always possible to convey the full implication of the legislation. The reader who is interested in any specific Act is therefore referred to the Statutes of Canada in the given volume and chapter.

**Legislation of the Third Session of the Twenty-Second Parliament,
Jan. 10 to Aug. 14, 1956**

Subject, Chapter and Date of Assent	Synopsis
4-5 Elizabeth II	
Agriculture—	
1 Mar. 7	<i>Prairie Grain Producers Interim Financing Act, 1956</i> , provides short-term credit for grain producers in the Prairie Provinces to meet temporary financial difficulties arising from inability to deliver grain to elevators.
2 Mar. 7	<i>Temporary Wheat Reserves Act</i> provides for payment of carrying costs on temporary wheat reserves owned by the Canadian Wheat Board, if over 178,000,000 bu. at commencement of the crop year.
14 June 12	<i>An Act to amend the Live Stock and Live Stock Products Act</i> includes minor amendments to the poultry production Part.
17 June 26	<i>An Act to amend the Canadian Farm Loan Act</i> changes the capital structure of the Canadian Farm Loan Board and certain of its financial operations; increases the amount of individual loans procurable and the period of repayment; and eliminates supplementary advances formerly provided in the form of second mortgages.
24 July 11	<i>An Act to amend the Farm Improvement Loans Act</i> extends the provisions of the Act to Mar. 31, 1959, increases the maximum individual loan by bank to borrower from \$4,000 to \$5,000 and continues the federal guarantee to an aggregate of \$300,000,000.
Finance—	
3 Mar. 22	<i>Appropriation Act No. 1, 1956</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1957.
4 Mar. 22	<i>Appropriation Act No. 2, 1956</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1956.
13 June 12	<i>Appropriation Act No. 3, 1956</i> , provides certain sums of money for the public service of the financial year ending Mar. 31, 1957.
15 June 12	<i>An Act to amend the Tariff Board Act</i> increases the membership of the Board from three to five.
16 June 26	<i>Appropriation Act No. 4, 1956</i> , provides supplementary sums for the public service of the financial year ending Mar. 31, 1957.
23 July 11	<i>Canadian National Railways Financing and Guarantee Act, 1956</i> , provides moneys to meet certain capital expenditures during the calendar year 1956 and to guarantee certain securities to be issued by the Canadian National Railway Company.
25 July 11	<i>An Act to amend the Industrial Development Bank Act</i> , in addition to certain administration changes, enlarges the classes of loans that may be made under the Act and raises the limit on the aggregate amount of loans exceeding \$200,000 from \$50,000,000 to \$75,000,000.
27 July 31	<i>Appropriation Act No. 5, 1956</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1957.
29 July 31	<i>The Federal-Provincial Tax-Sharing Arrangements Act</i> , authorizing the Minister of Finance of the Government of Canada to make payments to and enter into fiscal agreements with the Governments of the Provinces, provides the necessary authority for new financial arrangements with the provinces to come into effect on Apr. 1, 1957.
32 Aug. 14	<i>Appropriation Act No. 6, 1956</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1957.
44 Aug. 14	<i>An Act to amend the Public Service Superannuation Act</i> extends the application of certain provisions of the Act to certain persons or groups of persons not previously eligible for benefit.

**Legislation of the Third Session of the Twenty-Second Parliament,
Jan. 10 to Aug. 14, 1956—continued**

Subject, Chapter and Date of Assent	Synopsis
Finance—concl.	
46 Aug. 14	<i>An Act to amend the Small Loans Act</i> increases the maximum amount of a loan by money-lenders and small loans companies to \$1,500 from \$500; permits the securing of more than one loan by a borrower; and amends certain interest charges and repayment regulations.
Insurance—	
28 July 31	<i>An Act to amend the Canadian and British Insurance Companies Act</i> raises the amount of the deposit required for a certificate of registry to transact life or fire insurance and makes amendments <i>re</i> dates for filing of statements.
30 July 31	<i>An Act to amend the Foreign Insurance Companies Act</i> raises the amount of the deposit required for a certificate of registry to transact life or fire insurance and makes amendments <i>re</i> dates for filing of statements.
Justice—	
8 June 7	<i>An Act to amend the Judges Act</i> authorizes the payment of salaries to four additional judges of the Superior Court of Quebec and two additional judges of the Supreme Court of British Columbia.
45 Aug. 14	<i>An Act to amend the Royal Canadian Mounted Police Act</i> provides for the payment and recovery of succession duties payable on pensions and allowances; extends in certain cases and under certain conditions the time and service that may be counted for pension purposes; and provides funds for additional liability to RCMP pensions account resulting from general pay increases.
48 Aug. 14	<i>An Act to amend the Supreme Court Act and the Criminal Code</i> revises regulations <i>re</i> the appointment and service of the Registrar and Deputy Registrar of the Supreme Court and of other staff; other amendments deal with appeals to the Supreme Court.
Labour—	
26 July 11	<i>The Unemployment Assistance Act</i> authorizes contributions by Canada to be paid out of the Consolidated Revenue Fund, in respect of unemployment assistance costs in the provinces.
38 Aug. 14	<i>The Female Employees Equal Pay Act</i> stipulates that female employees shall be paid at a rate equal to that paid male employees whenever the work is identical or substantially the same and the work is done by, or for, the Federal Government, except where the difference of rates of pay is based on length of service or seniority, geographical area of employment or any factor other than sex. Enforcement procedure is defined and penalties laid down.
50 Aug. 14	<i>An Act to amend the Unemployment Insurance Act</i> extends the provisions of the Act to all persons engaged in the fishing industry; other amendments ease the requalifying requirement and adjust the provisions for computing the duration of benefit for such claimants.
National Revenue—	
5 June 7	<i>The Canada-Denmark Income Tax Agreement Act, 1956</i> , implements an agreement between Canada and Denmark for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income.
33 Aug. 14	<i>The Canada-Germany Income Tax Agreement Act, 1956</i> , implements an agreement between Canada and the Federal Republic of Germany for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income.
35 Aug. 14	<i>An Act to amend the Canada-United States of America Tax Convention Act, 1943</i> , further modifies and supplements the Convention and accompanying protocol of Mar. 4, 1942, for the avoidance of double taxation and the prevention of fiscal evasion in the case of income taxes.
36 Aug. 14	<i>An Act to amend the Customs Tariff</i> gives effect to Budget resolutions on the Customs Tariff.
37 Aug. 14	<i>An Act to amend the Excise Tax Act</i> gives effect to Budget resolutions on Excise Tax; of particular interest is the imposition of a tax on special editions of non-Canadian periodicals issued to the public in Canada.
39 Aug. 14	<i>An Act to amend the Income Tax Act</i> gives effect to Budget resolutions on Income Tax and contains over thirty revisions, deletions and additions pertaining to the Act.

**Legislation of the Third Session of the Twenty-Second Parliament,
Jan. 10 to Aug. 14, 1956—concluded**

Subject, Chapter and Date of Assent	Synopsis
Transportation and Communications—	
7 June 7	<i>An Act to amend the Department of Transport Act</i> advances to May 31, 1958, the expiry date of Section 6A of the Act concerning control of transport of goods in bulk.
11 June 7	<i>An Act to amend the St. Lawrence Seaway Authority Act</i> empowers the Authority to construct, maintain and operate international bridges and incidental works and to procure the incorporation of any necessary subsidiary companies for the purpose.
12 June 7	<i>An Act to amend the Trans-Canada Highway Act</i> extends the highway construction period to Dec. 31, 1960, with federal contributions to May 31, 1961; increases federal contributions to 90 p.c. for certain sections of the highway; and increases the total amount of federal expenditure on construction from \$150,000,000 to \$250,000,000.
19 June 26	<i>An Act respecting the construction of a line of railway in the Province of New Brunswick by the Canadian National Railway Company, from a point at or near Bartibog in a westerly direction to the Tomogonops River in the vicinity of Little River Lakes</i> , provides for the construction of such railway and its financing.
34 Aug. 14	<i>An Act to amend the Canada Shipping Act</i> includes revisions mainly of a technical character which bring provisions of the Act in line with modern marine practice; it approves the International Convention for the Prevention of Pollution of the Sea by Oil, 1954.
41 Aug. 14	<i>An Act to amend the Navigable Waters Protection Act</i> provides for the simplification of procedure in connection with the building of works on navigable waters. The Minister of Public Works rather than the Governor in Council is authorized to approve plans and sites, and construction may be started prior to such approval with the consent of the Minister.
43 Aug. 14	<i>An Act to amend the Post Office Act</i> provides for the transfer of a contract for the conveyance of mail under certain circumstances.
47 Aug. 14	<i>An Act to amend the St. Lawrence Seaway Authority Act</i> further amends the Act <i>re</i> the building of international bridges.
49 Aug. 14	<i>An Act to amend the Telegraphs Act</i> provides for the control of submarine cables terminating in or passing through Canadian territory.
Miscellaneous—	
6 June 7	<i>An Act to amend the Canadian Citizenship Act</i> effects changes regarding the granting of citizenship to children and to adults in certain circumstances; also amends certain items of procedure and regulations.
9 June 7	<i>An Act to amend the National Housing Act, 1954</i> , effects important amendments concerning the redevelopment of blighted areas in cities and increases the federal contribution to municipalities for clearance of substandard areas; the maximum amount of all loans under the Act is increased from \$2,000,000,000 to \$4,000,000,000.
10 June 7	<i>The Northern Ontario Pipe Line Crown Corporation Act</i> establishes the Corporation and defines its purposes, powers and financing.
18 June 26	<i>The Canadian Forces Act, 1956</i> , makes minor revisions to the Defence Services Pension Act and the National Defence Act.
20 June 26	<i>An Act to amend the Emergency Gold Mining Assistance Act</i> extends the application of the Act to the end of 1958.
21 June 26	<i>An Act to amend the Veterans' Business and Professional Loans Act</i> includes a minor adjustment with respect to bank losses as a result of such loan.
22 July 11	<i>An Act to amend the Canada Land Surveys Act</i> provides for an increase in remuneration for the members and secretary of the Board as well as in the fees paid to special examiners.
31 July 31	<i>An Act to amend the National Parks Act</i> withdraws certain lands described in the Schedule from Cape Breton Highlands National Park.
40 Aug. 14	<i>An Act to amend the Indian Act</i> effects many changes in connection with the administration of the Act; the maximum amount of money provided for loans to Indians under the Act is increased to \$1,000,000 from \$350,000.
42 Aug. 14	<i>An Act to amend the Northwest Territories Power Commission Act</i> changes the title of the Act to the Northern Canada Power Commission Act and authorizes the Commission to supply public utilities other than electric power to municipalities, organizations, corporations or individuals within the Yukon and Northwest Territories; a fund is established to finance investigations of possible power developments in the North.

**Legislation of the Fourth Session of the Twenty-Second Parliament,
Nov. 26, 1956 to Jan. 8, 1957**

Subject, Chapter and Date of Assent	Synopsis
5-6 Elizabeth II	
Finance—	
1 Nov. 26	<i>Appropriation Act No. 7, 1956</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1957.

**Legislation of the Fifth Session of the Twenty-Second Parliament,
Jan. 8, 1957 to Apr. 12, 1957**

Subject, Chapter and Date of Assent	Synopsis
5-6 Elizabeth II	
Agriculture—	
5 Mar. 28	<i>An Act to amend the Canadian Farm Loan Act</i> increases the authorized capital stock.
6 Mar. 28	<i>An Act to amend the Canadian Wheat Board Act</i> extends the provisions of the Act to Aug. 1, 1962.
15 Apr. 12	<i>An Act to amend the Agricultural Products Marketing Act</i> grants authority to provincial boards to impose levies and charges for the purpose of equalizing returns among producers of any agricultural product subject to marketing regulations.
27 Apr. 12	<i>The Fertilizers Act</i> provides for the regulation and control of agricultural fertilizers. This Act repeals R.S. 1952, c. 115.
32 Apr. 12	<i>An Act to amend the Prairie Farm Assistance Act</i> increases the awards and the levy authorized by the Act.
33 Apr. 12	<i>An Act to amend the Prairie Grain Producers Interim Financing Act, 1956</i> , makes the necessary revisions in dates to extend the application of the Act to June 1, 1958; the rate of interest on loans is modified and the maximum amount of loan increased from \$1,500 to \$3,000.
Finance—	
1 Feb. 6	<i>Appropriation Act No. 1, 1957</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1957.
2 Mar. 28	<i>Appropriation Act No. 2, 1957</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1957.
10 Mar. 28	<i>An Act to amend the Municipal Grants Act</i> increases the grants on federal property up to the full tax equivalent.
12 Mar. 28	<i>An Act to amend the Quebec Savings Banks Act</i> includes changes in cash reserves, investments, loans and advances, charitable funds, etc.
13 Mar. 28	<i>Appropriation Act No. 3, 1957</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1958.
14 Mar. 28	<i>Appropriation Act No. 4, 1957</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1958.
19 Apr. 12	<i>The Canadian National Railways Financing and Guarantee Act, 1957</i> , authorizes moneys to meet certain capital expenditures of the Canadian National Railways System and the guarantee of certain securities to be issued by the Company.
20 Apr. 12	<i>An Act to amend the Currency, Mint and Exchange Fund Act</i> changes the remedy allowance for ten ten-cent coins from 3.00 grains to 15.00 grains.

**Legislation of the Fifth Session of the Twenty-Second Parliament,
Jan. 8, 1957 to Apr. 12, 1957—continued**

Subject, Chapter and Date of Assent	Synopsis
Finance—concl.	
37 Apr. 12	<i>An Act to amend the United Kingdom Financial Agreement Act, 1946</i> , approves the Agreement between the Government of Canada and the Government of the United Kingdom which amends the Financial Agreement between the two Governments signed Mar. 6, 1956, by providing for deferment of annual instalments of principal and interest in place of the Article in the original Agreement providing for waiver of interest.
39 Apr. 12	<i>Appropriation Act No. 5, 1957</i> , grants certain sums of money for the public service of the financial year ending Mar. 31, 1958.
Fisheries—	
11 Mar. 28	<i>The Pacific Salmon Fisheries Act</i> implements a convention between Canada and the United States for the protection and extension of the sockeye salmon fisheries in the Fraser River System.
31 Apr. 12	<i>The Pacific Fur Seals Convention Act</i> provides implementing legislation to carry out Canada's obligation under the Interim Convention on Conservation of North Pacific Fur Seals entered into by the Governments of Canada, Japan, the Union of Soviet Socialist Republics and the United States of America. This legislation replaces the Pelagic Sealing (Provisional Agreement) Act passed in 1948, implementing an agreement between Canada and the United States.
Justice—	
24 Apr. 12	<i>An Act to amend the Exchequer Court Act</i> provides for a revision of salary for the Registrar of the Exchequer Court.
30 Apr. 12	<i>An Act to amend the Judges Act</i> increases by one the number of county judges for Ontario and amends the Act in line with changes in the Judicature Act of Nova Scotia.
34 Apr. 12	<i>An Act to amend the Prisons and Reformatories Act</i> authorizes the transfer of prisoners from any common gaol of British Columbia to the new Haney Correctional Institution and vice versa.
35 Apr. 12	<i>An Act to amend the Royal Canadian Mounted Police Act</i> provides that for purpose of determining liability in any action or proceeding by or against Her Majesty, a person who was at any time a member of the Force shall be considered to have been at such time a servant of the Crown.
36 Apr. 12	<i>An Act to amend the Territorial Lands Act</i> substitutes for stipendiary magistrate, a judge of the Court to deal with matters arising in the Northwest Territories and the Yukon Territory.
National Revenue—	
16 Apr. 16	<i>The Canada-Netherlands Income Tax Agreements Act, 1957</i> , implements an agreement between Canada and the Netherlands for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income.
17 Apr. 12	<i>The Canada-South Africa Death Duties Agreement Act, 1957</i> , implements an agreement between Canada and South Africa for the avoidance of double taxation and the prevention of fiscal evasion with respect to death duties.
18 Apr. 12	<i>The Canada-South Africa Income Tax Agreement Act, 1957</i> , implements an agreement between Canada and the Union of South Africa for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income.
21 Apr. 12	<i>An Act to amend the Customs Tariff</i> gives effect to Budget resolutions on the Customs Tariff.
22 Apr. 12	<i>An Act to amend the Dominion Succession Duty Act</i> provides, among other amendments, that the value of any property included in a succession to a charitable organization in Canada shall be deductible in determining the aggregate net value and dutiable value of a succession.
25 Apr. 12	<i>An Act to amend the Excise Act</i> reduces the amount of duty on Canadian raw leaf tobacco.
26 Apr. 12	<i>An Act to amend the Excise Tax Act</i> gives effect to Budget resolutions on the Excise Act.

**Legislation of the Fifth Session of the Twenty-Second Parliament,
Jan. 8, 1957 to Apr. 12, 1957—concluded**

Subject, Chapter and Date of Assent	Synopsis
National Revenue— concl.	
29 Apr. 12	<i>An Act to amend the Income Tax Act</i> gives effect to Budget resolutions on the Income Tax Act. Among other amendments, provision is made for the amount of a taxpayer's donations to charitable organizations in a year in excess of the amount deductible under the Act to be carried forward to the following year. A new Section permits the deduction of premiums paid under a registered retirement savings plan.
Trade—	
7 Mar. 28	<i>An Act to amend the Export and Import Permits Act</i> advances to July 31, 1960, the date of expiration of the Act.
8 Mar. 28	<i>An Act to amend the Export Credits Insurance Act</i> provides insurance for certain additional transactions and permits the Corporation, for income tax purposes, to deduct credits to the underwriting reserve.
Transportation—	
4 Mar. 28	<i>An Act to amend the Canada Shipping Act</i> makes a minor revision <i>re</i> penalty for violation of Part VII of the Act.
9 Mar. 28	<i>An Act to amend the Merchant Seamen Compensation Act</i> revises the rates of compensation payable to disabled seamen and dependants of deceased seamen under the Act.
38 Apr. 12	<i>The Windsor Harbour Commissioners Act</i> establishes a corporation under the name of Windsor Harbour Commissioners to manage and develop the harbour at the city of Windsor, Ont.
Miscellaneous—	
3 Mar. 28	<i>The Canada Council Act</i> provides for the establishment of a Canada Council for the encouragement of the arts, humanities and social sciences, through awards, grants, scholarships in support of study, research and publication of such works, and through exhibitions, performances and exchange with other countries. It provides also for grants to universities and similar institutions of higher learning with respect to building construction projects.
23 Apr. 12	<i>An Act to amend the Eastern Rocky Mountain Forest Conservation Act</i> amends the Agreement between Canada and the Province of Alberta respecting the conservation of the forests on the east slope of the Rocky Mountains.
28 Apr. 12	<i>Hospital Insurance and Diagnostic Services Act</i> authorizes contribution by Canada for programs, administered by the provinces, providing hospital insurance and laboratory and other services in aid of diagnoses to commence when at least six provinces, containing at least half the population of Canada, have entered into such agreements and qualified for receipt of such contributions.

PART V.—CANADIAN CHRONOLOGY

Events in the general chronology from 1497 to 1866 are given in the 1951 Year Book, pp. 46-49; from 1867 to 1953 in the 1954 Year Book, pp. 1259-1264; for 1954 in the 1955 Year Book, pp. 1329-1330; and for 1955 in the 1956 edition, pp. 1233-1234. References regarding federal and provincial elections or changes in legislatures or ministries are not included in the following listing but may be found in Chapter II on Constitution and Government and in the Appendix.

1956. *Jan. 11*, Mrs. Ann Shipley first woman in Canadian Parliamentary history to move the Address in Reply to the Speech from the Throne. *Feb. 3-8*, Rt. Hon. Sir Anthony Eden, Prime Minister of the United Kingdom addressed joint session of the Senate and House of Commons during official visit to Ottawa. *Feb. 3*, Merger of the Imperial Bank of Canada and Barclays Bank (Canada) as the Imperial Bank of Canada formally approved by the Federal Government. *Feb. 14*, End of 148-day strike involving 17,000 General Motors employees, the costliest strike in Canadian history. *Mar. 4*, President Giovanni Gronchi of Italy addressed joint session of the Senate and House of Commons during official visit to Ottawa. *Mar. 9*, Federal-Provincial tax conference opened at Ottawa; no agreement reached. *Mar. 23*, Pakistan formally became the Islamic Republic of Pakistan. *Mar. 26-27*, Rt. Hon. Louis S. St. Laurent, Prime Minister of Canada, Dwight D. Eisenhower, President of the United States, and Adolfo Ruiz Cortines, President of Mexico, met at White Sulphur Springs, Va., to discuss matters of common interest. *Apr. 23-27*, Merger of the Trades and Labour Congress of Canada and the Canadian Congress of Labour as the Canadian Labour Congress, at the founding convention in Toronto, Ont. *May 4-5*, NATO Council in Paris, France, named Hon. L. B. Pearson of Canada with representatives from Italy and Norway to study future NATO developments. *May 26*, Term of office of the Rt. Hon. Vincent Massey as Governor General of Canada extended for one year. *June 4-5*, The President of the Republic of Indonesia, His Excellency Dr. Achmed Sukarno, addressed the Canadian Parliament. *June 6-19*, The Prime Minister of New Zealand, the Rt. Hon. S. J. Holland, visited Canada. *June 19*, Canada's recognition of the independence of Tunisia and Morocco. *June 18*, Queen Elizabeth reviewed 300 Victoria Cross holders from the Commonwealth on centenary of the decoration in London, England. Thirty-six Canadian V.C. holders were present. *June 27-July 6*, Commonwealth Prime Ministers Conference in London, England, to review current state of international affairs. The Canadian delegation was led by the Prime Minister, the Rt. Hon. Louis S. St. Laurent. *July 25-29*, The Prime Minister of Australia, the Rt. Hon. R. G. Menzies and his wife, Dame Pattie Menzies, were guests of Canada. *Aug. 14*, The 3rd Session of the 22nd Parliament closed; the longest sitting (152 days) since 1903. *Aug. 18*, The Alexander Graham Bell Museum dedicated at Baddeck, N.S. *Aug. 28*, The opening session of the first Northwest Territories Council to be held above the Arctic Circle, at the new townsite of Aklavik. *Sept. 19*, Ontario Premier Leslie M. Frost turned the first sod for Canada's atomic power station at Des Joachim on the Ottawa River. *Sept. 20*, The Hon. George A. Drew resigned the leadership of the Progressive Conservative Party. *Sept. 24*, Atomic Energy Agreement signed in Washington by Canada, the United Kingdom and the United States

for interchanging rights in inventions and discoveries in the atomic energy field on which patents were held or applied for by one or more of the other countries as of Nov. 15, 1955. *Sept. 25*, First transatlantic three-way telephone cable opened between London, New York and Ottawa. *Nov. 1-10*, Emergency session of the United Nations General Assembly called at New York in regard to the Middle East crisis and the crisis in Hungary. *Nov. 5*, UN Assembly approved resolution sponsored by Canada, Colombia and Norway for a United Nations police force; Major-General E. L. M. Burns of Canada appointed Chief of the United Nations Command to organize an international force. *Nov. 12*, Rt. Hon. Louis S. St. Laurent announced creation of Canada Council for the Encouragement of the Arts, Humanities and Social Sciences. *Nov. 22*, Gen. Alfred Gruenther, just retired from post of Supreme Commander of NATO, arrived in Ottawa. *Nov. 24*, First 20 Canadians to join UN Emergency Force arrived in Egypt. *Nov. 26*, The Prime Minister of Ceylon, the Hon. S. W. R. D. Bandaranaike, visited Ottawa as guest of the Government of Canada. *Nov. 28*, Canada approved a vote of \$1,000,000 to the victims of events in Hungary and free passage to Canada for Hungarian refugees. *Nov. 29*, UN Force occupied buffer zone between Anglo-French and Egyptian forces on Suez. *Dec. 11-14*, The Ministerial Meeting of the North Atlantic Council met in Paris; Canada represented by the Hon. L. B. Pearson and the Hon. Ralph O. Campney. *Dec. 14*, John G. Diefenbaker elected leader of the Progressive Conservative Party. *Dec. 19*, Canadian-German air training agreement announced; arrangements made for training in Canada of 360 German aircrew for the F86 Sabres allotted the Federal Republic of Germany. *Dec. 21-23*, The Prime Minister of India, Mr. Jawaharlal Nehru, visited Ottawa.

1957. *Jan. 1*, The western section from James Bay to the Peace River District of the Mid-Canada radar warning line came into operation over a distance of 3,000 miles. *Jan. 1*, Two Canadians honoured in the Queen's New Year List—General Loewen and Sqdn. Ldr. Frederick Drury. *Jan. 2-10*, Strike of CPR employees halting operations on 17,000 miles of track. *Jan. 11*, Canadian aircraft carrier *Magnificent* with troops and supplies for UNEF reached Port Said. *Mar. 4*, The Prime Minister of France, His Excellency Guy Mollet, addressed the Parliament of Canada. *Mar. 5-6*, The United Kingdom Colony of the Gold Coast became a free and independent member of the Commonwealth named Ghana; Canada was represented at the ceremonies by Hon. George Prudham, Minister of Mines and Technical Surveys. *Mar. 6*, The Supreme Court of Canada nullified the Quebec Padlock Law. *Mar. 7*, UNEF took over the Gaza Strip in the Middle East. *Mar. 11*, The 11th Session of the United Nations General Assembly adjourned. *Mar. 18*, Disarmament

conference, including United States, United Kingdom, France, Russia and Canada, opened at London, England. *Mar. 25-26*, Prime Minister Macmillan of the United Kingdom, and Prime Minister St. Laurent of Canada, met in Bermuda to discuss common problems concerning the Middle East, Far East, NATO, European co-operation, the reunification of Germany, and defence. *May 2-3*, NATO Ministerial Meeting held in Bonn, Germany to discuss problems of security, political developments within and without the NATO area, events in the Middle East and Hungary and defence of the Atlantic Alliance. *June 13*, W. O. Frederick W. Humberstone, (RCAF) Sarnia, Ont., listed in the Queen's Birthday Honour List as a Member of the Order of the British Empire. *June 15*, Canadian Federation of Mayors and Municipalities Conference held at Montreal, Que. *June 21*, The Hon. Ellen Fairclough appointed Secretary of State for Canada, the first woman to hold a portfolio in a Canadian Cabinet and the second woman Cabinet Minister in the history of the Commonwealth. *June 26-July 5*, Prime Minister Diefenbaker attended the Conference of Commonwealth Prime Ministers in London, England. *June 25*, The Hon. George A. Drew appointed as Canada's High Commissioner to the United Kingdom, effective Aug. 1, 1957. *July 1*, Official opening of the International Geophysical Year extending to January 1959. *July 3*, Agreement signed between Canada and the United States for the conservation and regulation of the pink salmon fisheries of the Juan de Fuca-Fraser River area of the Pacific Coast. *July 18*, Ambassador Ahmet Cavat Ustun of Turkey became the Dean of the Diplomatic Representatives in Ottawa, succeeding former Ambassador A. H. J. Lovink of the Netherlands, who returned to The Hague on reassignment. *July 22*, Opening of the hearings of the Royal Commission reviewing Newfoundland's 1949 terms of Union with Canada. *July 27*, United States Secretary of State John Foster Dulles visited Ottawa for informal talks with Prime Minister Diefenbaker. *July 31*, The Distant Early Warning (DEW) radar line, a combined United States-Canada defence project, officially went into operation. *Aug. 1*, The Prime Minister of Australia, the Rt. Hon. Robert Menzies, arrived at Ottawa *en route* from England to Australia. Owen Sound, Ont., celebrated centenary; incorporated in 1857. Announcement by Defence Minister Pearkes of the official formation of a Canada-United States Continental Air Defence Command (NORAD) to be commanded by Lt.-General Earl Partridge (USAF); deputy commander to be Air Marshal C. Roy Slemmon (RCAF). *Aug. 11*, Worst aircraft crash in Canadian aviation history occurred at Issoudun, near Quebec City, when a chartered aircraft returning to Canada from England with veterans and their families crashed and burned, taking the lives of 79 persons. *Aug. 14-Sept. 25*, Canada was host at Ottawa to the 14th Congress of the Universal Postal Union presided over by the Canadian Postmaster-General, Walter J. Turnbull, and attended by members from 96 countries. *Aug. 21*, Prime Minister Diefenbaker announced \$150,000,000 loans program for low-cost housing. *Aug. 23*, Saskatchewan became the first Province to decide its share of the Trans-Canada Highway with the official opening by Premier T. C. Douglas, of that Province's 406-mile stretch of the Highway. *Aug. 24*, Navy Arctic patrol ship,

HMCS *Labrador*, became the first deep draught vessel to proceed through Bellot Strait. *Aug. 31*, The nine Malaysian States became an independent federation within the British Commonwealth of Nations, with Yang Di-Pertuan Besar as the Head of the new Federation. *Sept. 3*, Prime Minister Diefenbaker welcomed more than 1,200 scientists of the International Union of Geodesy and Geophysics from over 50 countries meeting in Toronto, Ont. *Sept. 5-7*, Sixteen distinguished Canadians, Britons and Americans met at Dartmouth College, N.H., for discussion of mutual problems. The assembly was addressed by Prime Minister Diefenbaker. *Sept. 6*, Rt. Hon. Louis S. St. Laurent announced his retirement as leader of the Liberal Party. *Sept. 15*, The Queen appointed Prime Minister Diefenbaker a member of the Imperial Privy Council. *Sept. 16*, A four-month strike involving 6,500 employees of the Aluminum Company of Canada at Arvida, Que., ended with an agreement on wage rates between company officials and the National Federation of Metal Trades. *Sept. 23*, Prime Minister Diefenbaker addressed General Assembly of the United Nations for the first time. *Sept. 28*, Four-day Conference of Commonwealth Finance Ministers opened at Mont Tremblant, Que. *Oct. 4*, Canadian and United Kingdom Finance Ministers met in Ottawa to discuss trade. The U.S.S.R. successfully launched the first earth satellite—*Sputnik I*. *Oct. 12*, The Hon. Lester B. Pearson the first Canadian to be awarded the Nobel Peace Prize. *Oct. 12-16*, H.M. Queen Elizabeth and H.R.H. Prince Philip arrived in Ottawa beginning a nine-day visit to Canada and the United States. *Oct. 13*, Queen Elizabeth made her first television broadcast. *Oct. 14*, For the first time in Canadian history the reigning monarch officiated at the opening of the Parliament of Canada. *Oct. 15*, Queen Elizabeth officially opened construction of the 20-mile Queensway in Ottawa. *Oct. 16*, The Queen and Prince Philip left Ottawa for Jamestown, Va., U.S.A. *Oct. 16*, Royal Commission appointed to study Energy Resources in Canada; headed by Henry Borden. *Oct. 18*, Montreal Herald ceased publication on completion of 146th year. *Oct. 24*, United Nations celebrated 12th birthday since signing of the Charter in San Francisco in 1945. *Nov. 3*, NRÜ, one of the most advanced research and engineering test reactors in the world, started operation at Chalk River, Ont. *Nov. 14*, The Prime Minister announced \$125,000,000-plans for Maritime power development. *Nov. 22*, Delegation of 58 businessmen from all provinces headed by Trade and Commerce Minister Hon. Gordon Churchill left for the U.K. where they toured industrial areas and discussed furthering of trade between the two countries. *Nov. 22*, First vessel passed through Iroquois Lock, the first St. Lawrence Seaway lock to be completed. *Nov. 26*, Two-day Dominion-Provincial Conference at Ottawa ended with federal offer of grants-in-aid to Atlantic Provinces; boosts in unemployment relief. *Dec. 10*, Royal Commission appointed to study price spreads in farm and fisheries production; headed by Alberta University President, Dr. Andrew Stewart. *Dec. 16-19*, A special meeting of 15 heads of Government of NATO member countries convened in Paris, France, to discuss problems of the free world including the implications of the successful testing by the U.S.S.R. of an intercontinental ballistic missile. Canada was represented by Prime Minister

Diefenbaker, External Affairs Minister Smith, Defence Minister Pearkes and Finance Minister Fleming.

1958. *Jan. 1*, Celebrations to commemorate British Columbia's centennial year began. *Jan. 16*, Hon. Lester B. Pearson chosen as national leader of the Liberal Party at convention in Ottawa. *Jan. 17*, Royal Commission appointed to study dispute between the CPR and the Brotherhood of Locomotive Firemen and Enginemen, headed by Justice Kellock. *Jan. 28*, Queen Mother Elizabeth stopped briefly in Montreal and Vancouver on round-the-world tour. Mr. Justice Roy L. Kellock, a Judge of the Supreme Court of Canada since October 1944, resigned due to ill health. *Feb. 1*, United States Army successfully launched first American earth satellite—*Explorer*. *Feb. 4*, Kellock Royal Commission declared that firemen were unnecessary on diesel engines used by the CPR in its freight and yard operations. *Feb. 16-20*, The Canadian Conference on Education met in Ottawa under the Chairmanship of Dr. Wilder Penfield. *Feb. 17*, Rt. Hon. Louis S. St. Laurent, Prime Minister of Canada from 1948-1957, announced his retirement from active politics. *Mar. 25*, Successful maiden flight of the Canadian-built supersonic interceptor CF-105, described as the ultimate in manned fighter aircraft. *Apr. 5*, Ripple Rock in Seymour Narrows near Campbell River, B.C., worst underwater

shipping hazard on the West Coast, removed by underwater explosion. *Apr. 15-16*, Twenty-one-storey Queen Elizabeth Hotel in central Montreal first CNR hotel to be built in 20 years, officially opened. *Apr. 24-May 20*, Trade mission from the United Kingdom toured Canada exploring ways of expanding British sales in this country. *Apr. 30*, Celebration in Montreal of the 300th anniversary of the first school established in that city by Marguerite Bourgeoys in 1658. *May 28-June 4*, President Theodor Heuss of the Federal Republic of Germany made state visit to Canada, the first German Head of State ever to do so. *June 12*, Prime Minister Macmillan of the United Kingdom addressed a joint session of the Senate and the House of Commons during a visit to Ottawa. *June 21-July 9*, Celebrations in Quebec City marking the 350th anniversary on July 1 of its founding in 1608 by Samuel de Champlain. *July 1*, Canadians celebrated the 91st anniversary of Confederation. Blasting of the cofferdam holding back the waters of the St. Lawrence River touched off the creation of the 100-sq. mile St. Lawrence power pool, permitting, within a few days, the operation of the first generators of the new hydro development and the use of two seaway locks on the U.S. side of the River and of the Canadian seaway lock at Iroquois. Inauguration of Canada's new microwave relay system, completed from coast to coast.

PART VI.—STATISTICAL SUMMARY OF THE PROGRESS OF CANADA 1871-1956

Newfoundland entered Confederation in 1949 and figures for that Province have since been included with Canadian statistics as they have become available. Under each item in the following Summary, the inclusion of Newfoundland data for the first time is indicated by a black dot (•). If no dot is shown on any of the years from 1951-56 for a particular item, Newfoundland is excluded throughout. In some instances the symbol does not apply. Revisions of figures published in previous editions of the Year Book are not indicated in this Summary.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA

NOTE.—The interpretation of the symbols used in the table will be found facing p. 1 of this volume.

Item		1871	1881	1891	1901	1911	1921
Population—¹							
1	Newfoundland..... No.	...	...	...	...	...	...
2	Prince Edward Island..... "	94,021	108,891	109,078	103,259	93,728	88,615
3	Nova Scotia..... "	387,800	440,572	450,396	459,574	492,338	523,837
4	New Brunswick..... "	285,594	321,233	321,263	331,120	351,889	387,876
5	Quebec..... "	1,191,516	1,359,027	1,488,535	1,648,898	2,005,776	2,360,510
6	Ontario..... "	1,620,851	1,926,922	2,114,321	2,182,947	2,527,292	2,933,662
7	Manitoba..... "	25,228	62,260	152,506	255,211	461,394	610,118
8	Saskatchewan..... "	..	..	..	91,279	492,432	757,510
9	Alberta..... "	..	..	..	73,022	374,295	588,454
10	British Columbia..... "	36,247	49,459	98,173	178,657	392,480	524,582
11	Yukon Territory..... "	..	..	..	27,219	8,512	4,157
12	Northwest Territories..... "	48,000	56,446	98,967	20,129	6,507	8,143
	Canada..... "	3,689,257	4,324,810	4,833,239	5,371,315	7,206,643	8,787,949 ²
13	Households (excl. Territories).. No.	..	800,410	900,080	1,058,386	1,482,980	1,897,110
Immigration—							
14	From United Kingdom..... No.	..	17,033	22,042	11,810 ³	144,076	43,772
15	From United States..... "	..	21,822	52,516	17,987 ⁴	112,028	23,888
16	From other countries..... "	..	9,136	7,607	19,352 ⁴	75,184	24,068
	Totals..... "	27,773	47,991	82,165	49,149 ⁴	331,288	91,728
Vital Statistics—							
17	Births (live)..... No.	..	..	..	..	..	..
18	Rates per 1,000 population... No.	..	..	..	..	..	..
19	Deaths, all causes..... No.	..	..	..	..	..	..
20	Rates per 1,000 population... No.	..	..	..	..	..	..
21	Marriages..... No.	..	..	..	..	..	..
22	Rates per 1,000 population... No.	..	..	..	..	..	..
23	Divorces..... No.	4	7	10	19	57	558
Health and Welfare—							
HOSPITALS—⁵							
Public Hospitals—							
24	Hospitals..... No.	..	..	..	..	..	..
25	Bed capacity ⁶..... "	..	..	..	..	..	..
26	Patient days ⁷..... "	..	..	..	..	..	..
27	Expenditure (net) ⁸..... \$	..	..	..	..	..	..
Tuberculosis Sanatoria—							
28	Sanatoria..... No.	..	..	..	..	..	..
29	Bed capacity..... "	..	..	..	..	..	..
30	Patient days..... "	..	..	..	..	..	..
31	Expenditure (net) ⁸..... \$	..	..	..	..	..	..
32	FAMILY ALLOWANCES ⁹..... \$	..	..	..	..	..	..
33	OLD AGE SECURITY..... \$	..	..	..	..	..	..
34	PENSIONS FOR THE BLIND ¹⁰..... \$	..	..	..	..	..	..
35	UNEMPLOYMENT INSURANCE ¹¹..... \$	..	..	..	..	..	..
Criminal Statistics—¹²							
36	Convictions, indictable offences. No.	..	3,509 ¹³	3,974	5,638	12,627	19,396
37	Convictions, offences punishable on summary conviction—						
38	Relating to traffic and parking regulations..... No.	..	30,365 ¹³	33,643	36,510	100,633	51,843
39	Other..... "	..	..	..	..	..	105,934

¹ At every census the previous post-censal estimates made at June 1 each year are adjusted to the newly recorded population figures.² Includes 485 members of the Royal Canadian Navy recorded separately.³ Inter-censal estimate—excludes households in institutions, hotels, camps, etc.⁴ Year ended Mar. 31.⁵ For reporting hospitals only; private and federal hospitals excluded.⁶ Bassinets for newborn excluded.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

NOTE.—The interpretation of the symbols used in the table will be found facing p. 1 of this volume.

1931	1941	1951	1953	1954	1955	1956	
...	...	361,416	383,000	395,000	406,000	415,074	1
88,038	95,047	98,429	101,000	101,000	100,000	99,285	2
512,846	577,962	642,584	663,000	673,000	683,000	694,717	3
408,219	457,401	515,697	533,000	540,000	547,000	554,616	4
2,874,662	3,331,882	4,055,681	4,269,000	4,388,000	4,517,000	4,628,378	5
3,431,683	3,787,655	4,597,542	4,941,000	5,115,000	5,266,000	5,404,933	6
700,139	729,744	776,541	809,000	823,000	839,000	850,040	7
921,785	895,992	831,728	861,000	873,000	878,000	880,665	8
731,605	796,169	939,501	1,012,000	1,057,000	1,091,000	1,123,116	9
694,263	817,861	1,165,210	1,248,000	1,295,000	1,342,000	1,398,464	10
4,230	4,914	9,096	9,000	10,000	11,000	12,190	11
9,316	12,028	16,004	16,000	17,000	18,000	19,313	12
10,376,786	11,506,655	14,009,429 ●	14,845,000	15,287,000	15,698,000	16,080,791	
2,275,171	2,706,089	3,420,822 ●	3,675,000 ⁸	3,785,000 ⁸	3,891,000 ⁸	3,941,148	13
7,678	435	31,559	46,574	43,120	29,228	50,246	14
15,195	6,594	7,755	9,407	10,131	10,395	9,777	15
4,657	2,300	155,077	112,887	100,976	70,323	104,834	16
27,530	9,329	194,391	168,865	154,227	109,946	164,857	
247,205	263,993	381,092 ●	417,884	436,198	442,937	450,739	17
23.2	22.4	27.2 ●	28.1	28.5	28.2	28.0	
108,446	118,797	125,823 ●	127,791	124,855	128,476	131,961	18
10.2	10.1	9.0 ●	8.6	8.2	8.2	8.2	
68,239	124,644	128,408 ●	131,034	128,629	128,029	132,713	19
6.4	10.6	2.2 ●	8.8	8.4	8.2	8.3	
700	2,461	5,263 ●	6,110	5,922	6,031	5,890 ^p	20
587	610	778	810 ●	817	858	872	21
43,247	53,305	68,674	70,223 ●	75,478	82,330	86,018	22
9,657,517	12,926,043	19,798,448	20,813,371 ●	21,978,256	23,655,377	24,855,330	23
38,309,400	..	196,203,373	235,512,500 ●	273,604,227	309,722,352	360,198,926	24
31	39	59 ●	60	56	56	56	25
6,044	8,655	13,502 ●	15,150	13,942	13,756	13,596	26
1,924,289	3,227,640	4,640,217 ●	5,160,391	4,674,914	4,398,412	4,240,580	27
5,329,393	7,753,229	26,815,147 ●	30,882,973	31,165,027	31,132,850	32,003,164	28
52	54	63 ●	69	73	73	73	29
29,283	38,800	44,205 ●	49,290	51,986	53,943	54,951	30
10,662,343	16,078,250	19,708,905 ●	21,534,703	22,243,176	22,948,007	22,993,091	31
13,235,767	14,725,760	46,403,522 ●	57,229,007	64,086,874	68,047,648	76,942,032	32
7,050,924 ⁹	28,472,475 ⁹	309,465,461 ●	334,197,685	350,113,902	366,465,965	382,535,026	33
..	1,067,239	99,268,006 ⁹ ●	323,141,614	338,970,791	353,205,333	366,218,474	34
..	..	3,901,109 ●	2,985,217	2,914,101	2,886,185	2,918,495	35
..	..	88,273,000 ●	135,822,000	186,852,000	257,629,000	215,206,000	36
31,542	42,646	40,289 ●	45,071	47,981	46,239	45,913	37
212,361	369,234	1,065,426 ●	1,505,931	1,685,811	1,837,814	2,127,737	38
115,417	178,322	243,040 ●	257,691	291,756	309,962	273,993	39

⁷ Days' stay of newborn excluded.⁸ Not all hospitals shown above furnished financial reports.⁹ Provinces contributed prior to 1952 but their contributions are not included.¹¹ Includes seasonal benefit payments from 1950.¹² Years ended Sept. 30 prior to 1950; 1950 and subsequently, years ended Dec. 31.¹³ 1886 figures; first year available.¹⁰ Federal contribution only.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item	1871	1881	1891	1901	1911	1921
Education—							
1	Total enrolment, all types..... No.	803,000	891,000	993,000	1,092,633	1,361,205	1,880,805
2	Teachers ² " "	13,559	18,016	23,718	27,126	40,516	56,607
3	Public expenditure on..... \$	..	..	..	11,044,925	37,971,374	112,976,543
Survey of Production—							
4	Net value..... \$'000	..	..	..	..	..	..
Agriculture—							
5	Area of occupied farms..... acre	36,046,401	45,358,141	58,997,995	63,422,338	108,968,715	140,887,903
6	Improved lands..... " "	17,335,818	21,899,181	27,729,852	30,166,033	48,733,823	70,769,548
7	Cash income from the sale of farm products..... \$'000	..	..	..	..	..	..
FIELD CROPS—⁴							
8	Wheat..... bu.	16,723,873	32,350,269	42,144,779	55,572,368	132,077,547	226,508,411
	" \$	16,993,265	38,820,323	31,667,529	36,122,039	104,816,825	374,178,601
9	Oats..... bu.	42,489,453	70,493,131	83,428,202	151,497,407	245,393,425	364,989,218
	" \$	15,966,310	23,967,665	31,702,717	51,509,118	86,796,130	180,989,587
10	Barley..... bu.	11,496,038	16,844,868	17,222,795	22,224,366	28,848,310	42,956,049
	" \$	8,170,735	11,791,408	8,611,397	8,889,746	14,653,697	38,514,070
11	Corn..... bu.	3,802,830	9,025,142	10,711,380	25,875,919	14,417,599	10,822,278
	" \$	2,283,145	5,415,085	5,034,348	11,902,923	5,774,039	7,081,140
12	Potatoes..... bu.	47,330,187	55,368,790	53,490,857	55,362,635	55,461,473	62,230,052
	" \$	15,211,774	13,288,510	21,396,342	13,840,658	27,426,765	44,635,547
13	Hay and clover..... ton	3,818,641	5,055,810	7,083,733	6,943,715	10,406,367	8,829,915
	" \$	38,869,900	40,446,480	69,243,597	85,625,315	90,115,531	174,110,386
	Total Areas, Field Crops ⁶ acre	..	..	15,662,811	19,763,740	30,556,168	47,553,418
	Total Values, Field Crops ⁶ \$	111,116,606	155,277,427	194,766,934	237,682,285	384,513,795	933,045,936
LIVESTOCK AND POULTRY—⁷							
14	Horses..... No.	836,700	1,059,400	1,470,600	1,577,500	2,599,000	3,451,800
	" \$	..	..	..	118,279,000	381,916,000	414,808,000
15	Milk cows..... No.	1,251,200	1,595,800	1,857,100	2,408,700	2,645,200	3,086,700
	" \$	..	..	..	69,238,000	111,833,000	188,518,000
16	Other cattle..... No.	1,373,100	1,919,200	2,263,500	3,167,800	3,880,900	5,282,800
	" \$	..	..	..	54,197,000	84,021,000	146,567,000
17	Sheep..... No.	3,155,500	3,048,700	2,563,800	2,510,200	2,174,300	3,200,500
	" \$	..	..	..	10,491,000	10,702,000	20,675,000
18	Swine..... No.	1,366,100	1,207,600	1,733,900	2,353,800	3,634,800	3,324,300
	" \$	..	..	..	16,446,000	26,987,000	35,869,000
19	All poultry..... No.	..	..	14,105,100	17,922,700	31,793,300	37,185,800
	" \$	..	..	..	5,724,000	14,654,000	38,015,000
	Total Values..... \$	..	..	..	274,375,000	630,113,000	844,452,000
DAIRYING—⁸							
20	Total milk production..... '000 lb.	..	..	..	6,866,834	9,806,741	11,897,545
	" \$	..	..	..	220,833,269	199,904,205	162,117,000
21	Cheese, factory ⁹ lb.	..	54,574,856	97,418,855	22,821,430	21,587,124	28,710,000
	" \$	..	5,457,486	9,741,886	22,222,639	21,587,124	28,710,000
22	Butter, creamery..... lb.	..	1,365,912	3,654,364	36,066,739	64,489,398	128,745,000
	" \$	..	341,478	913,591	7,240,972	15,597,807	48,135,000
23	Butter, dairy..... lb.	..	102,545,169	111,577,210	105,343,076	137,110,200	107,379,000
	" \$	..	..	..	21,384,644	30,269,497	35,307,000
24	Other dairy products ¹⁰..... \$	..	..	..	15,623,907	35,927,426	110,623,000
	Total Values, Dairy Products \$	..	22,743,939	30,315,214	66,470,953	103,381,854	222,775,000
Forestry—							
25	Primary forest production..... \$	..	..	..	..	..	168,054,024
26	Lumber production..... M ft. b.m.	..	..	..	..	4,918,202	2,869,307
	" \$	..	..	..	..	75,830,954	82,448,585
27	Total sawmill products..... \$	..	..	..	..	..	116,891,191
28	Pulp and paper products..... \$	..	..	..	..	..	151,003,165
29	Exports of wood, wood products and paper ¹²..... \$	..	..	25,351,085	33,099,915	56,334,695	284,561,478

¹ Estimated.² Up to 1941 includes teachers in provincially controlled ordinary and technical day schools only; subsequently all teachers.³ Includes the Yukon and Northwest Territories.⁴ Figures for the

decennial census years 1871-1921 are for the immediately preceding years; those for 1871 are for the four original provinces only.

⁵ Currently being revised.⁶ Includes other field crops, e.g., rye and flaxseed, not specified.⁷ On farms only.⁸ Figures for the decennial census years 1881-1921 are for the immediately

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1941	1951	1953	1954	1955	1956	
2,264,106	2,131,391	2,922,931 ●	3,206,181	3,387,557	3,644,900 ¹	3,843,300 ¹	1
71,246	75,308	105,796 ●	114,618	118,369	126,370 ¹	135,350 ¹	2
144,748,823	129,817,268	513,442,000 ●	627,012,000	705,412,000	751,000,000 ¹	835,000,000 ¹	3
..	4,592,464	13,249,469 ●	14,588,095	14,177,499	15,838,050	..	4
163,114,034	173,563,282	174,046,654 ●	..	..	..	173,923,691 ³	5
85,732,172	91,636,065	96,852,826 ●	..	..	..	100,326,243 ³	6
476,101	885,257	2,816,461	2,775,795	2,394,837	2,390,471	2,667,150 ⁴	7
312,325,000	314,710,000	553,646,000	5	5	5	573,062,000	8
123,550,000	192,642,000	856,724,000	5	5	5	614,818,000	9
328,278,000	306,052,000	488,125,000	5	5	5	524,445,000	10
77,970,000	125,657,000	369,237,000	5	5	5	300,189,000	11
67,382,600	110,401,000	245,212,000	5	5	5	269,065,000	12
17,465,000	47,296,000	269,943,000	5	5	5	195,551,000	13
5,449,000	13,672,000	15,900,000	5	5	5	27,814,000	14
2,274,000	9,868,000	28,500,000	5	5	5	33,377,000	15
87,175,000	61,731,000	48,361,000	5	5	5	68,932,000	16
22,359,000	46,234,000	98,088,000	5	5	5	77,914,000	17
14,539,600	14,448,000	19,488,000	5	5	5	19,655,000	18
110,110,000	178,638,000	297,290,000	5	5	5	302,698,000	19
58,862,305	55,102,799	60,864,320	5	5	5	61,370,000	20
435,966,400	678,899,000	2,121,657,000	5	5	5	1,757,332,000	21
3,113,900	2,788,800	1,303,800	5	5	5	782,100	22
205,087,000	184,549,700	94,130,000	5	5	5	74,384,000	23
3,371,900	3,626,000	2,903,800	5	5	5	3,160,000	24
160,655,000	191,214,000	722,589,000	5	5	5	447,057,000	25
4,601,100	4,891,000	5,459,300	5	5	5	4,942,300	26
94,952,000	138,196,200	871,003,000	5	5	5	539,694,000	27
3,627,100	2,840,000	1,461,200	5	5	5	1,619,700	28
19,680,000	17,038,600	38,439,000	5	5	5	25,983,000	29
4,699,800	6,081,400	4,914,300	5	5	5	4,730,900	30
33,288,000	54,911,800	185,773,000	5	5	5	115,064,000	31
65,468,000	63,526,200	67,857,000	5	5	5	73,052,000	32
45,138,000	27,444,100	86,943,000	5	5	5	79,729,000	33
558,800,000	613,354,300	1,998,877,000	5	5	5	1,281,911,000	34
14,339,686	16,068,037	15,309,971	16,448,679	16,902,148	17,298,471	17,303,082	35
113,956,639	152,790,000	94,314,000	83,219,000	92,587,000	87,554,000	93,082,000	36
12,824,695	26,107,000	33,527,000	26,968,000	30,824,000	29,212,000	33,574,000	37
225,955,246	285,848,000	257,165,000	302,783,000	313,230,000	318,577,000	303,248,000	38
50,198,878	93,198,000	162,154,000	179,088,000	182,943,000	184,808,000	175,681,000	39
98,590,000	75,483,000	26,830,000	21,169,000	19,487,000	18,583,000	18,589,000	40
20,098,000	22,221,000	16,159,000	12,321,000	11,182,000	10,617,000	10,590,000	41
109,262,600	158,267,000	403,052,000	438,871,000	449,268,000	468,866,000	491,550,000	42
192,384,173	299,793,000	614,892,000	657,248,000	674,217,000	693,503,000	711,395,000	43
141,123,930	225,615,876	821,021,875 ●	704,538,888	728,369,907	829,572,714	..	44
2,497,553	4,941,084	6,948,697 ●	7,305,958	7,243,855	7,920,033	7,739,603	45
45,977,843	129,287,703	507,650,241 ●	494,385,993	482,912,005	541,563,241	539,261,627	46
62,769,233	163,412,292	591,551,749 ●	580,693,704	572,186,498	644,482,990	639,414,360	47
174,739,954	334,726,175	1,237,897,470 ●	1,179,665,443	1,241,665,451	1,326,938,138	1,453,441,726 ¹¹	48
185,493,491	387,113,232	1,399,076,131 ●	1,295,395,860	1,378,354,376	1,520,921,089	1,514,832,426	49

preceding years. In the Censuses of 1881 and 1891 values only were given of factory butter and cheese; quantities are estimated. ⁹ Data shown for 1941 and subsequent years represent cheddar and other cheese made from whole milk; prior to 1941 the figures included other cheese for Quebec only. ¹⁰ Prior to 1921 this item does not include skim milk and buttermilk. ¹¹ Value of factory shipments. ¹² Years ended Mar. 31 prior to 1931.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item	1871	1881	1891	1901	1911	1921
Mineral Production—							
1	Gold.....oz. t.	105,187	63,524	45,018	1,167,216	473,159	926,329
	\$	2,174,412	1,313,153	930,614	24,128,503	9,781,077	19,148,920
2	Silver.....oz. t.	..	355,083 ¹	414,523	5,539,192	32,559,044	13,543,198
	\$	..	347,271 ¹	409,549	3,265,354	17,355,272	8,485,355
3	Copper.....lb.	..	3,260,424 ¹	9,529,401	37,827,019	55,648,011	47,620,820
	\$	..	366,798 ¹	1,226,703	6,096,581	6,886,998	5,953,555
4	Lead.....lb.	..	204,800 ¹	88,665	51,900,958	23,784,969	66,679,592
	\$	..	9,216 ¹	3,857	2,249,387	827,717	3,828,742
5	Zinc.....lb.	..	..	..	788,000 ²	1,877,479	53,089,356
	\$	..	..	..	36,011 ³	108,105	2,471,310
6	Nickel.....lb.	..	830,477 ⁴	4,035,347	9,189,047	34,098,744	19,293,060
	\$	..	498,286 ⁴	2,421,208	4,594,523	10,229,623	6,752,571
7	Coal.....short ton	1,063,742 ¹	1,537,106	3,577,749	6,486,325	11,323,388	15,057,498
	\$	1,763,423 ¹	2,688,621	7,019,425	12,699,243	26,467,646	72,451,656
8	Natural gas..... M cu. ft.	..	..	..	..	1,917,678	14,077,601
	\$	..	..	150,000 ⁵	339,476	4,914,164	4,594,164
9	Petroleum, crude..... bbl.	..	368,987	755,298	622,392	291,092	187,541
	\$	..	..	1,010,211	1,008,275	357,073	641,533
10	Asbestos.....short ton	..	..	9,279	40,217	127,414	92,761
	\$	..	..	999,878	1,259,759	2,943,108	4,906,230
11	Cement.....bbl.	..	69,843 ¹	93,479	450,394	5,692,915	5,752,885
	\$	..	81,909 ¹	108,561	660,030	7,644,537	14,195,143
	Totals, Mineral Production ⁷.. \$	..	10,221,255 ⁷	18,976,616	65,797,911	103,220,994	171,923,342
Water Power—							
12	Turbine installation..... h.p.	..	..	71,219	238,902	1,363,134	2,754,157
Central Electric Stations—							
13	Power stations..... No.	..	..	80	58	266	510
14	Capital invested..... \$	..	..	4,113,771	11,891,025	110,838,746	484,669,451
15	Power generated..... '000 kwh.	..	..	..	..	..	5,614,132
16	Customers..... No.	..	..	..	..	..	973,212
Fisheries—							
17	Marketed value of all products. \$	7,573,199	15,817,162	18,977,874	25,737,153	34,667,872	34,931,935
Furs—							
18	Pelts taken ⁹ No.	..	..	..	..	..	2,936,407
	\$	..	..	..	..	..	10,151,594
19	Value of animals on fur farms.. \$	..	..	..	..	..	5,977,545
Manufactures—							
20	Employees..... No.	187,942	254,935	369,595	339,173	515,203	438,555
21	Capital..... \$	77,964,020	165,302,623	353,213,000	446,916,487	1,247,583,609	2,697,558,073
22	Salaries and wages..... \$	40,851,009	59,429,002	100,415,350	113,249,350	241,008,416	497,399,761
23	Values of materials used in.... \$	124,907,846	179,918,593	250,759,292	266,527,858	601,509,018	1,365,292,585
Products—							
24	Gross ¹⁰ \$	221,617,773	309,676,068	469,847,886	481,053,375	1,165,975,639	2,488,987,148
25	Net..... \$	96,709,927	129,757,475	219,088,594	214,525,517	564,466,621	1,123,694,263
26	Index of Industrial Production.... (1935-39=100)	..	..	..	..	..	..
Construction—							
27	Values of contracts awarded... \$	..	..	..	..	345,425,000	240,133,300
Labour—							
Gainfully Occupied—^{12,13}							
28	Agricultural occupations..... No.	..	..	735,207	716,860	933,735	1,035,283
29	Other primary..... " " " " " "	..	..	58,211	71,584	139,877	115,737
30	Manufacturing..... " " " " " "	..	..	237,972	299,535	372,234	406,677
31	Construction..... " " " " " "	..	..	86,694	99,165	150,567	162,275
32	Transportation and communication..... " " " " " "	..	..	61,310	82,483	158,926	199,568
33	Trade and finance..... " " " " " "	..	..	88,064	99,552	221,805	293,334
34	Service..... " " " " " "	..	..	203,897	236,205	322,895	420,173
35	Clerical..... " " " " " "	..	..	24,121	58,789	106,351	217,937
36	Labourers ¹⁵..... " " " " " "	..	..	116,598	127,867	317,244	306,215
37	Not stated..... " " " " " "	..	..	3,534	792	..	7,149
	Totals, Gainfully Occupied ¹³.. " "	..	..	1,615,608	1,782,832	2,723,634	3,164,348
38	Wage-earners ¹³ No.	..	..	..	..	1,628,273	1,972,089

¹ 1887.² 1898.³ 1889.⁴ 1874.⁵ 1892.⁶ Tons.⁷ Includes other itemsnot specified. ⁸ Not comparable with previous years; only ultimate customers now included.ended June 30. ⁹ In 1952 gross value of products was replaced by value of factory shipments.

not include Newfoundland but reflects changes in Newfoundland production since 1951.

¹⁰ Years¹¹ Does¹² 10 years of age or

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1941	1951	1953	1954	1955	1956	
2,693,892	5,345,179	4,392,751 ●	4,055,723	4,366,440	4,541,962	4,383,863	1
58,093,396	205,789,392	161,872,873 ●	139,597,985	148,764,611	156,788,528	151,024,080	
20,562,247	21,754,408	23,125,825 ●	28,299,335	31,117,949	27,984,204	28,431,847	2
6,141,943	8,323,454	21,865,467 ●	23,774,271	25,907,870	24,676,472	25,497,681	
292,304,390	643,316,713	539,941,589 ●	506,504,074	605,464,042	651,987,423	709,720,590	3
24,114,065	64,407,497	149,028,216 ●	150,953,742	175,712,693	239,756,455	292,958,091	
267,342,482	460,167,005	316,462,751 ●	387,411,588	436,990,488	405,525,038	377,708,904	4
7,260,183	15,470,815	58,229,146 ●	50,076,822	58,250,831	58,314,500	58,582,651	
237,245,451	512,381,636	682,224,335 ●	803,523,295	752,982,353	866,714,038	845,265,125	5
6,059,249	17,477,337	135,762,643 ●	96,101,386	90,207,285	118,306,466	125,437,344	
65,666,320	282,258,235	275,806,272 ●	287,385,777	322,557,961	349,856,997	357,030,311	6
15,267,453	68,656,795	151,269,994 ●	160,430,098	180,173,392	215,866,007	222,204,860	
12,243,211	18,225,921	18,586,823 ●	15,900,673	14,913,579	14,818,880	14,915,610	7
41,207,682	58,059,630	109,038,835 ●	102,721,875	96,600,266	93,579,471	95,349,763	
25,874,723	43,495,353	79,460,667 ●	100,985,923	120,735,214	150,772,312	169,152,586	8
9,026,754	12,665,116	7,158,920 ●	10,877,017	12,482,109	15,038,508	16,849,556	
1,542,573	10,133,838	47,615,534 ●	80,898,897	96,080,345	129,440,247	171,981,413	9
4,211,674	14,415,096	116,655,238 ●	200,582,276	243,877,030	305,640,036	406,561,872	
164,296	477,846	973,198 ●	911,226	924,116	1,063,802	1,014,249	10
4,812,886	21,468,840	81,584,345 ●	86,052,895	86,409,212	96,191,317	99,859,969	
10,161,658	8,368,711	17,007,812 ●	22,238,335	22,437,477	25,168,464	5,021,683 ¹³	11
15,826,243	13,063,588	40,446,288 ●	58,842,022	59,035,644	65,650,025	75,233,321	
230,434,726	560,241,290	1,245,483,595 ●	1,336,303,503	1,488,382,091	1,795,310,796	2,084,905,554	
6,666,337	8,845,038	13,342,504 ●	14,929,074	16,684,131	17,511,148	18,356,148	12
559	607	647 ●	524	557	..	..	13
1,229,988,951	1,641,460,451	..	..	..	..	..	14
16,330,867	33,317,663	54,851,844 ●	62,860,927	65,936,440	72,910,592	78,004,353	15
1,632,792	2,081,270	3,439,750 ●	3,817,455	4,001,626	4,224,901 ¹⁴	4,424,644 ¹⁵	16
30,517,306	62,258,997	204,912,000 ●	173,332,000	190,508,000	181,026,000	197,650,000 ¹⁶	17
4,060,356	7,257,337	7,479,272	7,568,865 ●	6,274,727	9,670,796	7,727,264	18
11,803,217	21,123,161	31,134,400	23,349,680 ●	19,287,522	30,509,515	28,051,746	
8,497,237	7,928,971	10,195,561	10,835,709	12,941,155	15,008,081 ●	12,765,000	19
528,640	961,178	1,258,375 ●	1,327,451	1,267,966	1,298,461	1,364,163	20
3,705,701,893	4,905,503,966	..	..	..	..	..	21
557,566,990	1,264,862,643	3,276,280,917 ●	3,957,018,348	3,896,687,691	4,142,409,534	4,600,943,000 ¹⁷	22
1,221,911,982	3,296,547,019	9,074,526,353 ●	9,380,558,682	9,241,857,554	10,338,202,165	11,698,222,000 ¹⁸	23
2,555,126,448	6,076,308,124	16,392,187,132 ●	17,785,416,854	17,554,527,504	19,513,933,811	21,849,415,000 ¹⁹	24
1,252,017,248	2,605,119,788	6,940,946,783 ●	7,993,069,351	7,902,124,137	8,753,450,496	9,630,722,000 ²⁰	25
..	164.8	226.5 ²¹	248.4	244.6	265.8	284.4	26
315,482,000	393,991,300	2,295,499,200 ●	2,017,060,700	2,154,959,200	3,183,592,000	3,426,905,500	27
1,127,682	1,083,816	826,759	..	..	..	..	28
150,276	203,586	196,996	..	..	..	..	29
495,842	709,181	973,982	..	..	..	..	30
203,056	213,493	319,065	..	..	..	..	31
289,030	311,645	492,986	..	..	..	..	32
352,414	370,617	520,761	..	..	..	..	33
616,953	725,450 ²²	919,922	..	..	..	..	34
258,684	314,051	541,713	..	..	..	..	35
426,242	252,693	323,829	..	..	..	..	36
1,654	11,413	63,606	..	..	..	..	37
3,921,833	4,195,951 ²³	5,179,613	..	..	..	..
2,570,097	2,816,798 ²⁴	4,006,466	..	..	..	..	38

over prior to 1911; 14 years of age or over after 1921.
314,584 persons on Active Service on June 2, 1941.
and mining.

¹³ Exclusive of the Territories.

¹⁴ Exclusive of

¹⁵ Exclusive of labourers in agriculture, fishing, logging

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item	1871	1881	1891	1901	1911	1921
Transportation—							
STEAM RAILWAYS—							
1	Miles in operation..... No.	2,695	7,194	13,838	18,140	25,400	39,191
2	Capital liability..... \$	257,035,188 ¹	284,419,293	632,061,440	816,110,837	1,528,639,201	2,164,687,636
3	Passengers..... No.	5,190,416 ²	6,943,671	13,222,568	18,385,722	37,097,718	46,793,251
4	Freight..... ton	5,670,836 ²	12,065,323	21,753,021	36,999,371	79,884,282	83,730,829
5	Earnings..... \$	19,470,540 ²	27,987,509	48,192,099	72,898,749	188,733,494	458,008,891
6	Expenses..... \$	15,775,532 ²	20,121,418	34,960,449	50,368,726	131,033,785	422,581,205
URBAN TRANSIT SYSTEMS—							
7	Passengers carried..... No.	..	..	..	..	..	..
8	Vehicle-miles run.....	..	..	..	..	..	..
9	Gross passenger revenue..... \$	..	..	..	..	..	..
ROAD TRANSPORTATION—							
10	Highways, total milages ³ No.	..	..	..	..	..	..
11	Capital expenditure on ⁴..... \$	..	..	..	..	..	..
12	Motor vehicles registered..... No.	..	..	..	..	21,783	464,805
13	Total provincial revenue from licences and operation..... \$	..	..	..	..	..	..
SHIPPING—							
14	Vessels on the registry..... No.	..	7,394	7,015	6,697	8,088	7,482
	..... ton	..	1,310,896	1,005,475	666,276	770,446	1,223,973
15	International Sea-borne— ^{4,5} ton	6,576,771	6,967,449	9,372,369	13,235,307	25,205,441	27,344,957
16	Entered.....	6,549,257	6,834,983	9,430,279	12,794,501	22,224,104	27,303,673
17	Cleared.....	13,126,028	13,802,432	18,802,648	26,029,808	47,429,545	54,648,630
	Totals.....	..	..	..	..	..	..
18	Coastwise— ⁴ ton	..	7,664,863	12,835,774	17,927,959	34,280,669	28,567,545
19	Entered.....	..	7,451,903	12,150,356	16,516,837	32,347,265	27,773,668
20	Cleared.....	..	15,116,766	24,986,130	34,444,796	66,627,934	56,341,213
	Totals.....	..	..	..	..	..	..
CANALS—							
21	Passengers carried..... No.	100,377	118,136	146,336	190,428	304,904	230,129
22	Freight..... ton	3,955,621	2,853,230	2,902,526	5,665,259	38,030,353	9,407,021
AIR TRANSPORTATION—⁶							
23	Miles flown..... No.	..	..	..	..	..	294,449
24	Passenger miles.....	..	..	..	..	..	..
25	Freight carried..... lb.	..	..	..	..	..	79,850
26	Mail carried.....	..	..	..	..	..	..
Communications—							
27	Telegraphs, miles of line..... No.	..	1,947	30,565	35,938	42,351	52,784
28	Telephones.....	..	..	..	63,192	302,759 ⁷	902,090
29	Telephones, employees ⁸.....	..	..	..	..	10,425 ⁷	19,943
Post Office—							
30	Revenue..... \$	803,637	1,344,970	2,515,824	3,421,192	9,146,952	26,331,119
31	Expenditure..... \$	994,876	1,876,658	3,161,676	3,837,376	7,954,223	24,661,262
32	Money orders issued..... \$	4,546,434	7,725,212	12,478,178	17,956,258	70,614,862	173,523,322
Wholesale and Retail Trade—							
Wholesale—							
33	Establishments..... No.	..	..	..	..	..	..
34	Employees.....	..	..	..	..	..	..
35	Net sales..... \$	..	..	..	..	..	..
36	Retail—Stores..... No.	..	..	..	..	..	..
37	Employees, full-time.....	..	..	..	..	..	..
38	Net sales..... \$	..	..	..	..	..	..

¹ 1876. ² 1875.
and inland international.³ Fiscal years.⁴ Fiscal years prior to 1911.⁵ Includes sea-going⁶ Includes Atlantic and Pacific overseas services of Canadian carriers from 1951.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1941	1951	1953	1954	1955	1956	
42,280	42,441	42,956 ●	43,163	43,132	43,444	43,652	1
4,232,022,088	3,397,488,564	3,571,693,932 ●	3,861,756,258	3,975,594,115	4,108,574,616	4,185,193,864	2
26,396,812	29,779,241	30,995,604 ●	28,736,159	28,396,528	27,229,962	25,893,163	3
74,129,694	116,808,091	161,260,521 ●	156,249,259	143,194,840	167,862,156	181,935,822	4
353,549,382	533,291,947	1,088,583,789 ●	1,205,935,414	1,095,440,918	1,198,351,601	1,397,755,407	5
321,025,588	403,733,542	977,577,062 ●	1,100,393,836	1,019,534,989	1,048,564,681	1,235,899,339	6
..	..	..	..	1,236,965,743 ●	1,178,952,495	1,151,928,811	7
..	..	..	..	205,271,859 ●	198,885,300	203,888,474	8
..	..	..	..	127,238,090 ●	125,419,886	129,213,139	9
378,094	561,489	511,878 ●	517,809	524,055	455,404	453,582	10
66,250,229	37,237,954	192,810,362 ●	234,334,349	229,087,011	294,343,957	421,146,178	11
1,200,668	1,572,784	2,872,420 ●	3,430,672	3,644,589	3,948,652	4,230,647	12
42,231,027	91,139,300	252,213,001 ●	307,664,164	329,552,161	377,927,301	422,523,915	13
8,966	8,667	15,292 ●	16,181	16,568	17,188	17,653	14
1,484,423	1,271,811	1,659,351 ●	1,694,715	1,632,306	2,316,396	2,347,311	15
45,834,452	31,452,400	47,508,342 ●	56,589,078	54,767,687	58,018,365	63,105,100	15
45,077,424	33,313,400	52,750,461 ●	61,962,634	59,578,143	60,306,168	67,415,232	16
90,911,876	64,765,800	100,258,803 ●	118,551,712	114,345,830	118,324,533	130,520,332	17
47,134,652	48,107,158	60,802,798 ●	67,417,391	64,291,085	67,228,840	75,220,366	18
47,540,555	46,433,320	55,609,082 ●	62,022,657	60,247,848	64,889,982	76,857,713	19
94,675,207	94,540,478	116,411,880 ●	129,440,048	124,538,933	132,118,822	152,078,079	20
126,633	100,092	93,512	112,082	116,231	178,932	123,241	21
16,189,074	23,453,367	29,325,034	33,373,064	30,070,701	34,874,198	40,016,565	22
7,046,276	12,508,390	52,578,934 ●	64,076,912	61,582,481	83,805,304	101,723,710	23
4,073,552	56,723,714	689,819,451 ●	942,269,095	1,066,805,242	1,223,825,448	1,547,279,882	24
2,372,467	16,559,611	59,199,354 ●	177,451,345	109,299,356	233,561,830	318,042,182	25
470,461	3,411,971	16,824,652 ●	20,319,952	24,228,571	26,616,505	27,914,288	26
53,228	52,246	53,580 ●	52,727	46,284	48,067	48,062	27
1,364,200	1,562,146	3,113,766 ●	3,606,407	3,860,269	4,151,678	4,499,325	28
23,825	20,103	47,387 ●	50,540	51,929	55,673	60,121	29
30,416,107	40,383,366	90,454,678 ●	112,024,245	111,107,484	131,315,049	137,696,621	30
36,292,604	38,699,674	91,781,466 ●	105,553,191	113,581,752	123,611,055	127,421,739	31
167,749,651	173,565,550	511,915,621 ●	623,266,884	676,080,657	690,824,787	725,930,733	32
13,140 ⁹	24,758	26,167 ●	..	..	..	..	33
90,564 ⁹	117,471	178,658 ¹⁰	..	..	..	..	34
3,325,210,300 ⁹	5,290,751,000	224,526 ¹¹	..	..	..	..	35
124,608 ⁹	136,990	14,401,036,700 ●	..	..	..	..	36
238,683 ⁹	297,047	153,034 ●	..	..	..	..	37
2,735,740,000 ⁹	3,414,613,000	454,794 ¹⁰	..	..	..	..	38
		603,891 ¹¹	12,128,034,000 ¹²	12,065,758,000 ¹²	13,111,895,000 ¹²	14,058,724,000 ¹²	38

¹ As at June 30.² Excludes rural lines in Saskatchewan.³ Census figures for 1930.¹⁰ Average

maximum.

¹¹ Average maximum.¹² Estimated on intercensal survey.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item	1871	1881	1891	1901	1911	1921
Wholesale and Retail Trade—concl.							
1	Services—						
	Establishments..... No.	..	..	..	..	..	..
2	Employees.....	..	..	..	..	..	..
3	Receipts..... \$	..	..	..	..	..	..
4	Commercial Failures ¹ No.	..	..	1,861	1,341	1,332	2,451 •
5	Liabilities..... \$	..	..	16,723,939	10,811,671	13,491,196	73,299,111 •
Foreign Trade—²							
6	Exports, domestic..... \$'000	57,630	83,945	88,672	177,431	274,317	1,189,164
7	Re-exports..... \$'000	9,853	13,375	8,799	17,078	15,684	21,264
8	Imports, for consumption..... \$'000	84,214	90,488	111,534	177,931	452,725	1,240,159
	Totals, Foreign Trade..... \$'000	151,698	187,808	209,004	372,440	742,725	2,450,587
9	Domestic exports to all Commonwealth..... \$'000	25,346	45,980	47,137	100,748	148,967	403,452
10	Exports to United Kingdom..... \$'000	21,734	42,637	43,244	92,858	132,157	312,845
11	Imports from all Commonwealth..... \$'000	51,317	45,514	44,337	46,653	129,468	266,003
12	Imports from United Kingdom..... \$'000	48,498	42,885	42,019	42,820	109,935	213,974
13	Exports to United States..... \$'000	29,164	34,033	37,743	67,984	104,116	542,323
14	Imports from United States..... \$'000	27,186	36,339	52,033	107,378	275,824	856,177
15	Exports to other countries..... \$'000	3,120	3,026	3,791	8,700	21,233	243,389
16	Imports from other countries..... \$'000	5,712	8,635	15,163	23,900	47,433	117,979
EXPORTS, DOMESTIC, BY CHIEF ITEMS—							
17	Wheat..... '000 bu.	1,749	2,524	2,108	9,740	45,802	129,215
	..... \$'000	1,982	2,594	1,583	6,872	45,521	310,952
18	Wheat flour..... '000 bbl.	306	440	297	1,119	3,049	6,017
	..... \$'000	1,610	2,173	1,389	4,015	13,855	66,520
19	Oats..... '000 bu.	542	2,927	261	8,155	5,432	14,321
	..... \$'000	231	1,192	130	2,491	2,145	14,152
20	Barley..... '000 bu.	..	8,811	4,892	2,386	1,545	8,564
	..... \$'000	..	6,261	2,930	1,123	831	11,469
21	Bacon, hams, shoulders and sides..... '000 cwt.	103	104	76	1,055	599	982
	..... \$'000	1,019	758	628	11,778	8,526	31,492
22	Beef and veal..... '000 cwt.	41	14	3	97	10	520
	..... \$'000	241	84	16	813	92	8,331
23	Cheese..... '000 lb.	8,271	49,256	106,202	195,926	181,896	133,620
	..... \$'000	1,110	5,510	9,509	20,697	20,740	37,147
24	Planks and boards..... M ft.	829,550	652,621	775,793	735,695	1,127,723	1,604,463
	..... \$'000	8,356	7,102	8,627	9,381	21,510	71,079
25	Woodpulp..... '000 cwt.	..	..	..	..	6,589	14,363
	..... \$'000	..	..	281	1,937	5,716	71,552
26	Newsprint..... '000 cwt.	..	..	..	..	..	15,113
	..... \$'000	..	..	..	..	3,092	78,922
27	Farm implements..... '000	..	31	253	1,743	5,912	12,527
28	Copper..... '000 lb.	6,246	39,604	10,994	26,346	55,005	74,176
	..... \$'000	120	150	505	2,659	5,575	12,748
29	Nickel..... '000 lb.	..	..	5,352	9,538	34,768	47,018
	..... \$'000	..	..	240	958	3,842	9,405
30	Lead..... '000 cwt.	7	..	..	656	32	111
	..... \$'000	7	..	7	2,517	101	526
31	Zinc..... '000 cwt.	..	..	..	..	..	177
	..... \$'000	..	..	..	..	..	964
32	Asbestos..... '000 ton	..	..	7	27	70	191
	..... \$'000	..	..	514	865	2,076	12,633
EXPORTS, DOMESTIC—							
33	Vegetable products (except chemicals, fibres and wood) \$'000	..	..	13,743	25,542	84,368	482,140
34	Animals and their products (except chemicals and fibres) \$'000	..	..	36,399	68,465	69,693	188,360
35	Fibres, textiles and textile products..... \$'000	..	..	873	1,881	1,819	18,784
36	Wood, wood products and paper..... \$'000	..	..	25,351	33,100	56,335	284,561
37	Iron and its products..... \$'000	..	..	557	3,779	9,884	76,501
38	Non-ferrous metals and their products..... \$'000	..	..	1,619	33,395	34,001	45,939
39	Non-metallic minerals and their products (except chemicals)..... \$'000	..	..	3,989	7,356	10,038	40,345
40	Chemicals and allied products \$'000	..	..	851	792	3,089	20,143
41	All other commodities..... \$'000	..	..	5,291	3,122	5,089	32,390
	Totals, Exports, Domestic. \$'000	57,630	83,945	88,672	177,431	274,317	1,189,164

¹ Census figures for 1930.² Figures include 5,542 hotels with 46,556 average minimum and 64,062 average maximum full-time employees and with receipts of \$348,401,100.³ Average minimum.⁴ Average

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1941	1951	1953	1954	1955	1956	
42,223 ¹	49,271	58,748 ² ●	..	..	..	..	1
55,257 ¹	62,781	143,800 ^{2,3} ●	..	..	..	..	2
249,455,900 ¹	254,678,000	190,048 ^{2,4} ●	..	..	..	..	3
2,563	882	797	1,039	1,381	1,352	1,320	4
52,987,554	6,959,000	19,048,000	30,304,000	52,017,000	38,148,000	51,678,000	5
587,653	1,621,003	3,914,460 ●	4,117,406	3,881,272	4,281,784	4,789,746	6
11,907	19,451	48,924 ●	55,195	65,645	69,499	73,397	7
628,098	1,448,792	4,084,856 ●	4,382,830	4,093,196	4,712,370	5,705,449	8
1,227,659	3,089,246	8,048,241 ●	8,555,432	8,040,113	9,063,653	10,568,592	
219,781	878,641	872,407 ●	897,585	848,461	1,006,437	1,055,922	9
170,597	658,228	631,461 ●	665,232	653,408	769,313	812,706	10
152,000	359,942	727,089 ●	623,962	574,231	610,303	705,911	11
109,468	219,419	420,985 ●	453,391	392,472	400,531	484,679	12
240,197	599,713	2,297,675 ●	2,418,915	2,317,153	2,559,343	2,818,655	13
393,775	1,004,498	2,812,927 ●	3,221,214	2,961,380	3,452,178	4,161,667	14
127,675	142,649	744,379 ●	800,906	715,658	716,004	915,169	15
82,323	84,351	544,840 ●	537,654	557,586	649,889	837,871	16
194,826	196,646	237,061 ●	290,073	208,262	189,967	302,770	17
117,871	161,856	441,043 ●	567,907	375,339	338,216	513,081	
5,697	11,439	12,079 ●	11,144	10,074	8,601	8,583	18
20,207	44,807	113,554 ●	102,160	88,029	74,442	71,549	
11,177	7,692	59,273 ●	80,393	40,244	12,529	10,112	19
3,768	3,295	53,899 ●	60,403	32,467	11,930	9,316	
24,260	3,209	43,906 ●	109,372	77,013	63,906	81,095	20
9,924	1,959	58,822 ●	136,729	89,363	76,461	94,977	
128	4,646	61 ●	70	81	99	80	21
2,035	77,494	3,650 ●	5,508	6,349	6,463	5,063	
37	62	934 ●	255	186	87	128	22
430	996	50,965 ●	9,267	4,538	2,721	3,644	
84,788	92,331	30,653 ●	16,429	5,006	13,749	12,216	23
10,595	13,555	10,232 ●	4,518	1,544	4,045	4,178	
937,733	2,282,139	3,435,510 ●	3,364,762	4,033,512	4,603,164	3,936,161	24
20,116	74,205	312,198 ●	282,103	324,724	385,313	326,445	
12,451	28,234	44,866 ●	39,003	43,608	47,323	47,480	25
30,057	85,898	365,133 ●	248,675	271,418	297,304	304,536	
40,165	65,240	102,241 ●	107,505	110,431	115,263	119,344	26
107,233	154,357	536,372 ●	619,033	635,670	665,877	708,385	
2,889	30,972	106,438 ●	74,316	76,771	76,010	67,477	27
196,789	430,087	304,193 ●	399,136	445,031	459,706	480,729	28
17,065	40,951	81,691 ●	117,351	127,334	163,924	194,206	
63,529	275,190	262,366 ●	290,236	317,438	347,759	353,676	29
14,182	67,680	136,689 ●	162,542	182,154	215,169	222,909	
2,208	3,818	2,536 ●	3,302	3,541	3,030	2,596	30
4,660	13,525	45,290 ●	37,835	40,530	37,202	35,034	
2,391	3,988	6,105 ●	7,105	7,826	8,198	7,770	31
5,565	12,278	83,669 ●	57,572	58,392	70,558	74,011	
159	454	942 ●	879	688	1,002	964	32
5,175	19,411	80,333 ●	83,972	82,566	94,804	99,895	
209,761	285,709	894,210 ●	1,096,763	803,481	752,348	974,964	33
70,938	201,731	348,033 ●	250,919	269,861	263,621	260,249	34
5,394	30,820	36,858 ●	24,333	20,969	22,816	22,568	35
185,493	387,113	1,399,076 ●	1,295,396	1,378,354	1,520,921	1,514,458	36
19,086	239,901	342,299 ●	358,438	300,692	398,782	458,849	37
56,159	244,012	569,870 ●	682,183	717,073	852,923	959,471	38
14,977	45,172	131,529 ●	147,393	145,573	206,200	292,100	39
10,849	58,676	131,690 ●	137,885	153,238	183,507	182,854	40
14,995	127,869	60,895 ●	124,095	92,031	80,666	124,233	41
587,653	1,621,003	3,914,460 ●	4,117,406	3,881,272	4,281,784	4,789,746	

maximum. ⁵ Dun and Bradstreet figures. Newfoundland excluded in 1941.

⁷ Less than \$500.

⁶ Fiscal years prior to

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item	1871	1881	1891	1901	1911	1921
Foreign Trade—concluded							
IMPORTS FOR CONSUMPTION—							
1	Vegetable products (except chemicals, fibres and wood) \$'000	..	..	24,212	38,036	79,214	259,431
2	Animals and their products (except chemicals and fibres) \$'000	..	..	8,081	14,023	30,672	61,722
3	Fibres, textiles and textile products \$'000	..	..	28,670	37,285	87,916	243,608
4	Wood, wood products and paper \$'000	..	..	5,203	8,197	26,852	57,449
5	Iron and its products \$'000	..	..	15,143	29,956	91,968	245,626
6	Non-ferrous metals and their products \$'000	..	..	3,511	7,167	27,580	55,651
7	Non-metallic minerals and their products (except chemicals) \$'000	..	..	14,139	21,255	53,431	206,095
8	Chemicals and allied products \$'000	..	..	3,698	5,685	12,472	37,887
9	All other commodities \$'000	..	..	8,577	16,327	42,620	72,688
	Totals, Imports \$'000	84,214	90,488	111,534	177,931	452,725	1,240,159
Prices—							
10	Wholesale indexes (1935-39=100)...	81.3	72.4	67.1	63.7	81.1	143.4
11	Consumer price index (1949=100)...	..	..	..	..	..	80.9
Federal Finance—1							
12	Customs duties \$	11,841,105	18,406,092	23,305,218	28,293,930	71,838,089	163,266,804
13	Excise duties \$	4,295,945	5,343,022	6,914,850	10,318,266	16,869,837	37,118,367
14	Income tax \$	..	..	..	..	..	46,381,824
15	Sales tax (net) \$	..	..	..	..	..	38,114,539
16	Total receipts from taxation \$	16,320,369	23,942,139	30,220,068	38,612,196	88,707,926	368,770,498
17	Per capita receipts from taxes \$	4.50	5.63	6.32	7.28	12.69	43.10
18	Total revenue \$	19,335,561	29,635,298	38,579,311	52,514,701	117,780,409	436,292,185
19	Revenue per capita \$	5.34	6.96	8.07	9.91	16.87	50.99
20	Total expenditure \$	19,293,478	33,796,643	40,793,208	57,982,866	122,861,250	528,302,513
21	Expenditure per capita \$	5.32	7.94	8.54	10.94	17.58	61.75
22	Gross debt \$	115,492,683	199,861,537	289,899,230	354,732,433	474,941,487	2,902,482,117
23	Net assets \$	37,786,165	44,465,757	52,090,199	86,252,429	134,899,435	501,603,133
24	Net debt \$	77,706,518	155,395,780	237,809,031	268,480,004	340,042,052	2,340,878,984
Provincial Finance—1							
25	Gross ordinary revenue \$	5,518,946	7,858,698	10,693,815	14,074,991	40,706,948	102,030,458
26	Gross ordinary expenditure \$	4,935,008	8,119,701	11,628,353	14,146,059	38,144,511	102,569,515
National Accounts—							
27	National income \$'000,000	..	..	..	..	..	..
Note Circulation—							
28	Chartered bank notes \$	20,914,637	28,516,692	33,061,042	50,601,205	89,982,223	194,621,710
29	Bank of Canada and other notes ² \$	7,244,341	14,539,795	16,176,316	27,898,509	99,308,945	271,531,162
Chartered Banks—							
30	Capital, paid-up \$	37,095,340	59,534,977	60,700,697	67,035,615	103,009,256	129,096,339
31	Assets \$	125,273,631	200,613,879	269,307,032	531,829,324	1,303,131,260	2,841,782,079
32	Liabilities to the public \$	80,250,974	127,176,249	187,332,325	420,003,743	1,097,661,393	2,556,454,190
33	Deposits payable on demand \$	..	..	..	95,169,631	304,801,755	551,914,643
34	Deposits payable after notice \$	..	..	..	221,624,664	568,976,209	1,289,347,063
35	Totals, deposits ³ \$	56,287,391	94,346,481	148,396,968	349,573,327	980,433,788	2,264,586,736
36	Cheque payments \$'000	..	..	..	..	..	27,157,474 ⁴
Savings Banks—							
37	Deposits in Post Office \$	2,497,260	6,208,227	21,738,648	39,950,813	43,330,579	29,010,619
38	Deposits in Government banks \$	2,072,037	9,628,445	17,661,378	16,098,146	14,673,752	10,150,189
39	Deposits in special banks \$	5,766,712	7,685,888	10,982,232	19,125,097	34,770,386	58,576,775
Loan Companies (Federal)—							
40	Assets \$	8,392,464	73,906,638	125,041,146	158,523,307	389,701,988	96,698,810
41	Liabilities \$	8,392,958	71,965,017	123,915,704	158,523,307	389,701,988	95,281,122
Loan Companies (Provincial)—							
42	Assets \$	..	..	..	..	..	86,144,153 ⁵
43	Liabilities \$	..	..	..	..	..	87,385,907 ⁵

¹ Unless otherwise stated, figures are for fiscal years ended within years given.² Figures for years commencing with 1953 are not comparable with those prior to that year as they exclude refunds applicable to other excise duties.³ Fiscal years ended nearest Dec. 31, 1950, i.e., Mar. 31, 1951 for most provinces.⁴ Includes Yukon Territory in this and subsequent years.⁵ Includes the Northwest Territories in this and subsequent years.⁶ In January 1950, the chartered banks' liability for such of their notes as then remained

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1941	1951	1953	1954	1955	1956	
134,433	171,835	542,641 ●	488,368	540,289	567,475	628,777	1
28,630	34,846	125,562 ●	88,227	85,412	107,802	122,154	2
90,152	161,139	483,520 ●	387,115	333,324	381,613	416,390	3
34,923	26,739	137,047 ●	160,951	166,001	195,958	228,208	4
116,209	431,622	1,332,251 ●	1,531,556	1,322,497	1,605,968	2,231,354	5
38,667	94,758	290,848 ●	364,571	357,185	398,793	491,539	6
106,088	189,954	684,535 ●	658,476	599,216	663,684	765,971	7
31,337	65,382	191,813 ●	221,834	220,406	260,499	288,587	8
47,659	262,516	296,638 ●	481,733	468,866	530,578	532,469	9
628,098	1,448,792	4,084,856 ●	4,382,830	4,098,196	4,712,370	5,705,449	
94.0	116.4	240.2	220.7	217.0	218.9	225.6	10
67.9	69.6	113.7	115.5	116.2	116.4	118.1	11
131,208,955	130,757,011	295,721,750 ●	389,442,109	407,312,241	397,228,330	481,239,668	12
57,746,808	88,607,559	241,046,174 ●	241,360,370	226,732,460	226,458,438	249,383,313	13
71,048,022	248,143,022	1,513,135,510 ●	2,473,790,089	2,432,603,505	2,265,297,267	2,279,503,322	14
20,783,944	179,701,224	460,120,405 ●	566,233,167 ²	587,331,544	572,214,713	641,510,469	15
296,276,366	778,175,450	2,785,349,899 ●	3,997,592,937	4,008,584,453	3,773,438,080	3,995,721,170	16
29.02	68.37	203.13 ●	277.03	270.86	248.33	256.12	17
356,160,876	872,169,645	3,112,535,948 ●	4,360,822,789	4,396,319,583	4,123,513,300	4,400,046,639	18
35.04	76.63	226.99 ●	302.21	297.43	271.37	282.04	19
440,008,855	1,249,601,446	2,901,241,698 ●	4,337,275,512	4,350,522,378	4,275,362,885	4,433,127,636	20
43.26	109.80	211.58 ●	300.57	294.33	281.36	284.16	21
2,610,265,699	5,018,928,037	16,923,307,028 ●	17,918,490,812	17,923,189,502	17,951,491,464	19,124,232,779	22
348,653,762	1,370,236,588	5,439,992,080 ●	6,756,756,543	6,807,252,438	6,688,411,310	7,843,863,815	23
2,261,611,937	3,648,691,449	11,433,314,948 ●	11,161,734,269	11,115,937,064	11,263,080,154	11,280,368,964	24
179,143,480	404,791,000 ³	1,139,026,000 ⁴ ●	1,369,183,000	1,465,614,000	1,558,734,000 ⁵	1,771,239,000	25
190,754,202	349,818,000 ³	1,040,871,000 ⁴ ●	1,207,475,000	1,295,194,000	1,411,740,000 ⁵	1,588,396,000	26
3,333	6,563	17,138 ●	19,133	18,794	20,740	23,049	27
128,881,241	78,761,049	6	6	6	6	6	28
153,079,362	406,433,409	1,360,679,422	1,530,102,146	1,623,456,907	1,738,490,823	1,868,703,781	29
144,674,853	145,500,000	146,502,115 ●	149,954,371	168,218,000 ⁶	180,998,000	195,348,000	30
3,066,018,472	4,008,381,256	9,384,800,263 ●	10,334,778,308	11,433,157,000 ⁶	12,701,736,000	13,427,896,000	31
2,741,554,216	3,711,870,680	9,019,780,755 ●	9,945,599,866	10,920,704,000 ⁶	12,146,344,000	12,780,895,000	32
578,604,394	1,088,198,370	2,711,524,845 ●	3,081,389,559	3,597,243,000 ⁶	3,915,196,000	4,180,355,000	33
1,437,976,832	1,616,129,007	4,592,929,818 ●	5,098,833,601	5,615,070,000 ⁶	6,096,401,000	6,451,347,000	34
2,422,884,828	3,464,781,844	8,404,510,837 ●	9,482,574,676	10,713,131,000 ⁶	11,904,011,000	12,531,329,000	35
31,586,468	39,242,957	112,184,633 ●	137,416,847	148,063,796	161,350,878	192,289,896	36
24,750,227	22,176,633	37,661,921	39,322,230	37,792,914	36,780,667	36,164,460	37
69,820,422	76,391,775	193,982,871	214,122,001	219,372,081	237,816,198	256,526,482	38
147,094,183	130,795,391	203,103,850	217,019,970	255,446,553	281,004,266	296,715,805	39
146,046,087	130,787,116	165,768,886	184,448,041	221,612,649	245,606,324	258,245,799	40
65,728,238	58,220,073	88,991,635	106,571,244	117,936,572	129,589,371	140,453,366	41
66,387,987	58,220,073	63,699,805	78,117,407	88,083,833	97,917,400	105,577,299	42

outstanding was transferred to the Bank of Canada.

⁷ As at June 30 from 1871 to 1901. Annual averages of month-end figures from 1911 to 1953. As at Dec. 31 for 1954 and subsequent years. ⁸ Beginning 1954, not strictly comparable with previous years. See p. 1144.

⁹ Includes deposits of Federal and Provincial Governments and also deposits elsewhere than in Canada from 1901.

¹⁰ 1924.

¹¹ 1922.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—concluded

	Item	1871	1881	1891	1901	1911	1921
Licensees under the Small Loans Act—							
SMALL LOANS COMPANIES—							
1	Assets..... \$	..	..	..	..	..	..
2	Liabilities..... \$	..	..	..	..	..	..
MONEYLENDERS—							
3	Assets..... \$	..	..	..	..	..	..
4	Liabilities..... \$	..	..	..	..	..	..
Trust Companies (Federal)—							
ASSETS—							
5	Company funds..... \$	..	..	..	..	..	10,237,930
6	Guaranteed funds..... \$	..	..	..	..	..	8,774,185
LIABILITIES—							
7	Company funds..... \$	..	..	..	..	..	9,907,331
8	Guaranteed funds..... \$	..	..	..	..	..	8,549,642
9	ESTATES, TRUST AND AGENCY FUNDS..... \$	..	..	..	..	..	79,252,639
Trust Companies (Provincial)—³							
ASSETS—							
10	Company funds (par value)... \$	..	..	..	..	..	31,418,403
11	Guaranteed funds (par value).. \$	..	..	..	..	..	32,885,302
12	ESTATES, TRUST AND AGENCY FUNDS..... \$	..	..	..	..	..	629,953,917
Dominion Fire Insurance—⁴							
13	Amounts at risk, Dec. 31..... \$	228,453,784	462,210,968	759,602,191	1,038,687,619	2,279,868,346	6,020,513,832
14	Premium income for each year \$	2,321,716	3,827,116	6,168,716	9,650,348	20,575,255	47,312,564
15	Claims paid during each year.. \$	1,549,199	3,169,824	3,905,697	6,774,956	10,936,948	27,572,560
Provincial Fire Insurance—							
16	Amounts at risk, Dec. 31..... \$	..	..	..	..	..	1,269,764,435
17	Premium income for each year. \$	..	..	..	..	..	5,545,549
18	Claims paid during each year.. \$	..	..	..	..	..	3,544,820
Dominion Life Insurance—⁴							
19	Amounts in force, Dec. 31..... \$	45,825,935	103,290,932	261,475,229	463,769,034	950,220,771	2,934,843,848
20	Premium income for each year. \$	1,852,974	3,094,689	8,417,702	15,189,854	31,619,626	98,864,371
21	Claims paid during each year.. \$	..	..	..	6,845,941	11,051,679	23,997,262
Provincial Life Insurance—							
22	Amounts in force, Dec. 31..... \$	..	..	..	..	..	222,871,178
23	Premium income for each year. \$	..	..	..	..	..	4,389,008
24	Claims paid during each year.. \$	..	..	..	..	..	2,812,077

¹ Includes moneylenders.² Included with small loans companies.³ Compiled from data supplied voluntarily to the Superintendent of Insurance by provincial companies and estimated to cover about 90 p.c. of all

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—concluded

1931	1941	1951	1953	1954	1955	1956	
827,373 823,120	7,918,926 7,918,926	73,980,068 ● 73,980,068 ●	154,737,883 ¹ 154,737,883 ¹	172,173,681 ¹ 172,173,681 ¹	208,517,770 ¹ 208,517,770 ¹	262,386,415 ¹ 262,386,415 ¹	1 2
..	11,351,467	30,570,466 ●	2	2	2	2	3
..	11,351,467	30,570,466 ●	2	2	2	2	4
15,459,347 25,718,219	20,596,781 38,570,855	28,446,331 ● 93,565,917 ●	29,629,779 110,366,037	29,451,872 140,601,795	32,090,504 159,235,891	36,690,878 170,344,746	5 6
15,066,431 25,718,221	20,086,776 38,570,855	26,658,321 ● 93,565,917 ●	29,048,202 110,366,037	28,850,642 140,601,795	31,905,971 159,235,891	36,381,834 170,344,746	7 8
215,698,469	268,596,524	543,983,754 ●	631,231,540	663,520,956	734,670,479	815,367,349	9
66,338,148 125,829,165	58,165,471 108,912,208	74,399,404 ● 258,413,136 ●	81,569,089 268,175,625	83,140,092 383,697,760	88,360,564 437,168,231	91,554,381 446,448,674	10 11
1,961,948,175	2,418,950,841	3,282,558,573 ●	3,470,781,614	3,734,874,516	3,985,662,299	4,318,560,879	12
9,544,641,293 50,342,069 29,938,409	11,386,819,286 49,305,539 17,814,322	33,490,653,184 ● 134,496,218 ● 52,086,541 ●	41,703,092,570 145,937,546 66,787,604	45,605,786,183 148,446,105 70,445,544	146,444,845 77,836,245	155,506,787 86,088,850	13 14 15
1,341,184,333 7,185,066 4,985,605	1,120,181,968 3,992,765 2,237,832	2,887,564,984 ● 11,614,247 ● 6,174,914 ●	3,394,406,231 13,552,440 7,041,774	3,063,622,286 13,217,519 7,257,343	15,071,988 9,299,116	16,068,792 9,790,651	16 17 18
6,622,267,793 225,100,571 56,579,358	7,348,550,742 203,459,238 75,082,008	17,235,583,302 ● 394,019,379 ● 128,489,084 ●	21,226,905,619 454,763,007 136,748,240	23,134,578,868 486,409,812 154,481,756 ⁵	25,451,571,525 520,098,190 161,883,205	29,087,416,143 564,723,434 180,852,023	19 20 21
202,094,301 5,178,615 2,603,453	164,451,218 3,988,952 2,583,958	708,733,573 ● 16,806,502 ● 6,727,241 ●	1,093,568,633 23,653,050 8,146,839	1,290,183,490 27,842,856 8,932,337 ⁵	1,497,587,789 29,182,573 8,520,674	1,779,673,222 33,082,660 10,369,482	22 23 24

provincial business. The figures included all the large and most of the small provincial companies.
fraternal insurance.

⁵ Includes annuity contracts for 1954 and subsequent years.

⁴ Excludes

APPENDIX

Certain information given in Chapter II on Constitution and Government is brought up to the date of going to press (July 1, 1958) in this Appendix.

Page 44, Table 4

Members of the Eighteenth Ministry as at July 1, 1958

(According to precedence of Ministers)

Prime Minister.....	Rt. Hon. JOHN GEORGE DIFENBAKER
Minister of Public Works.....	Hon. HOWARD CHARLES GREEN
Minister of Finance and Receiver General.....	Hon. DONALD METHUEN FLEMING
Minister of Veterans Affairs.....	Hon. ALFRED JOHNSON BROOKS
Minister of Transport.....	Hon. GEORGE HEES
Solicitor General of Canada.....	Hon. LÉON BALCER
Minister of National Defence.....	Hon. GEORGE RANDOLPH PEARKE
Minister of Trade and Commerce.....	Hon. GORDON CHURCHILL
Minister of Justice and Attorney General.....	Hon. EDMUND DAVIE FULTON
Minister of National Revenue.....	Hon. GEORGE CLYDE NOWLAN
Minister of Agriculture.....	Hon. DOUGLAS SCOTT HARKNESS
Minister of Citizenship and Immigration.....	Hon. ELLEN LOUKS FAIRCLOUGH
Minister of Fisheries.....	Hon. J. ANGUS MACLEAN
Minister of Labour.....	Hon. MICHAEL STARR
Postmaster General.....	Hon. WILLIAM MCLEAN HAMILTON
Minister without Portfolio.....	Hon. JAMES MACKERRAS MACDONNELL
Minister without Portfolio.....	Hon. WILLIAM J. BROWNE
Minister of Mines and Technical Surveys.....	Hon. PAUL COMTOIS
Minister of National Health and Welfare.....	Hon. JAY WALDO MONTEITH
Minister of Northern Affairs and National Resources.....	Hon. FRANCIS ALVIN G. HAMILTON
Secretary of State for External Affairs.....	Hon. SIDNEY EARLE SMITH
Minister of Defence Production.....	Hon. RAYMOND O'HURLEY
Secretary of State.....	Hon. HENRI COURTEMACHE

Page 46, Table 6

Information in continuance of the table on duration and sessions of Parliament is as follows:—

23rd Parliament.....	Date of Opening, Oct. 14, 1957 Date of Dissolution, Feb. 1, 1958
24th Parliament.....	Date of Election, Mar. 31, 1958 Date of Opening of 1st Session, May 12, 1958

Page 51, Table 10

Members of the House of Commons, elected at the General Election of Mar. 31, 1958 are listed as follows:—

Electoral Districts, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Fourth General Election, Mar. 31, 1958

Note.—Information supplied by the Chief Electoral Officer; Party affiliations are unofficial. P.C.=Progressive Conservative; Lib.=Liberal; C.C.F.=Co-operative Commonwealth Federation; L.-Lab.=Liberal Labour.

Province and Electoral District	Name of Member	P.O. Address	Party Affiliation
Newfoundland— (7 members)			
Bonavista-Twillingate.....	Hon. J. W. PICKERSGILL.....	Ottawa, Ont.....	Lib.
Burin-Burgeo.....	C. W. CARTER.....	Ottawa, Ont.....	Lib.
Grand Falls-White Bay-Labrador.	C. R. M. GRANGER.....	St. John's.....	Lib.
Humber-St. George's.....	H. M. BATTEN.....	Corner Brook.....	Lib.
St. John's East.....	J. A. McGRATH.....	St. John's.....	P.C.
St. John's West.....	Hon. W. J. BROWNE.....	Ottawa, Ont.....	P.C.
Trinity-Conception.....	J. R. TUCKER.....	St. John's.....	Lib.

Electoral Districts, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Fourth General Election, Mar. 31, 1958—continued

Province and Electoral District	Name of Member	P.O. Address	Party Affiliation
Prince Edward Island— (4 members)			
Kings.....	J. A. MACDONALD.....	Cardigan.....	P.C.
Prince.....	O. H. PHILLIPS.....	Alberton.....	P.C.
Queens.....	Hon. J. A. MACLEAN.....	Ottawa, Ont.....	P.C.
	H. MACQUARRIE.....	Victoria.....	P.C.
Nova Scotia— (12 members)			
Antigonish-Guysborough.....	C. A. O'LEARY.....	Antigonish.....	P.C.
Cape Breton North and Victoria..	R. MUIR.....	Sydney Mines.....	P.C.
Cape Breton South.....	D. MACINNIS.....	Glace Bay.....	P.C.
Colechester-Hants.....	C. F. KENNEDY.....	Truro.....	P.C.
Cumberland.....	R. C. COATES.....	Amherst.....	P.C.
Digby-Annapolis-Kings.....	Hon. G. C. NOWLAN.....	Ottawa, Ont.....	P.C.
Halifax.....	R. J. McLEAVE.....	Halifax.....	P.C.
	E. L. MORRIS.....	Halifax.....	P.C.
Inverness-Richmond.....	R. S. MACLELLAN.....	Sydney.....	P.C.
Pictou.....	H. R. MACLEWAN.....	New Glasgow.....	P.C.
Queens-Lunenburg.....	L. R. CROUSE.....	Lunenburg.....	P.C.
Shelburne-Yarmouth-Clare.....	F. F. LEGERE.....	Pinkney's Point.....	P.C.
New Brunswick— (10 members)			
Charlotte.....	R. D. C. STEWART.....	St. George.....	P.C.
Gloucester.....	H.-J. ROBICHAUD.....	Caraquet.....	Lib.
Kent.....	H.-J. MICHAUD.....	Buctouche.....	Lib.
Northumberland-Miramichi.....	G. R. McWILLIAM.....	Newcastle.....	Lib.
Restigouche-Madawaska.....	J. C. VAN HORNE.....	Campbellton.....	P.C.
Royal.....	Hon. A. J. BROOKS.....	Ottawa, Ont.....	P.C.
Saint John-Albert.....	T. M. BELL.....	Saint John.....	P.C.
Victoria-Carleton.....	G. W. MONTGOMERY.....	Woodstock.....	P.C.
Westmorland.....	W. L. M. CREAGHAN.....	Moncton.....	P.C.
York-Sunbury.....	J. C. MACRAE.....	Fredericton.....	P.C.
Quebec— (75 members)			
Argenteuil-Deux-Montagnes.....	J.-O. LATOUR.....	St. Benoit.....	P.C.
Beauce.....	J.-P. RACINE.....	St. Honore de Shenley.....	Lib.
Beauharnois-Salaberry.....	G. BRUCHÉSI.....	Châteauguay.....	P.C.
Bellechasse.....	N. DORION.....	Ottawa, Ont.....	P.C.
Berthier-Maskinongé-Delanaudière	R. PAUL.....	Louiseville.....	P.C.
Bonaventure.....	L. GRENIER.....	New Carlisle.....	P.C.
Brome-Missisquoi.....	W. H. GRAFFTEY.....	Knowlton.....	P.C.
Chambly-Rouville.....	M. JOHNSON.....	Montreal.....	P.C.
Champlain.....	P. LAHAYE.....	Batiscan.....	P.C.
Chapleau.....	J.-J. MARTEL.....	Amos.....	P.C.
Charlevoix.....	M. ASSELIN.....	La Malbaie.....	P.C.
Châteauguay-Huntingdon- Laprairie.....	M. E. BARRINGTON.....	Orms town.....	P.C.
Chicoutimi.....	V. BRASSARD.....	Chicoutimi.....	P.C.
Compton-Frontenac.....	G. M. STEARNS.....	Lac Mégantic.....	P.C.
Dorchester.....	N. DROUIN.....	St. Maxime.....	P.C.
Drummond-Arthabaska.....	S. BOULANGER.....	Victoriaville.....	Lib.
Gaspé.....	R. ENGLISH.....	Quebec.....	P.C.
Gatineau.....	R. LEDUC.....	Maniwaki.....	Lib.
Hull.....	A. CARON.....	Hull.....	Lib.
Îles-de-la-Madeleine.....	J. R. KEAYS.....	Gaspé.....	P.C.
Joliette-L'Assomption-Montcalm..	L.-J. PIGEON.....	Joliette.....	P.C.
Kamouraska.....	C. RICHARD.....	Ste. Anne de la Pocatière.....	P.C.
Labelle.....	Hon. H. COURTEMANCHE.....	Ottawa, Ont.....	P.C.
Lac-Saint-Jean.....	R. PARIZEAU.....	Alma.....	P.C.
Lapointe.....	A. BRASSARD.....	Jonquière.....	Lib.
Lévis.....	M. BOURGET.....	Lévis.....	Lib.
Longueuil.....	P. SEVIGNY.....	St. Lambert.....	P.C.
Lotbinière.....	Hon. R. O'HURLEY.....	Ottawa, Ont.....	P.C.
Matapédia-Matane.....	J.-A. BELZILE.....	St. Léon le Grand.....	P.C.
Mégantic.....	G. ROBERGE.....	Theftord Mines.....	Lib.
Montmagny-L'Islet.....	Hon. J. LESAGE.....	Quebec.....	Lib.
Nicolet-Yamaska.....	Hon. P. COMTOIS.....	Ottawa, Ont.....	P.C.
Pontiac-Témiscamingue.....	P. MARTINEAU.....	Campbell's Bay.....	P.C.

¹ Resigned June 11, 1958 to assume leadership of Liberal Party in Quebec; seat vacant at July 1, 1958.

Electoral Districts, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Fourth General Election, Mar. 31, 1958—continued

Province and Electoral District	Name of Member	P.O. Address	Party Affiliation
Quebec—concluded			
Portneuf.....	A. ROMPRÉ.....	St. Ubald.....	P.C.
Quebec East.....	Y.-R. TASSÉ.....	Sillery.....	P.C.
Quebec South.....	J. FLYNN.....	Quebec.....	P.C.
Quebec West.....	J.-E. BISSONNETTE.....	Quebec.....	P.C.
Quebec-Montmorency.....	R. LAFRENIÈRE.....	Ottawa, Ont.....	P.C.
Richelieu-Verchères.....	L. CARDIN.....	Sorel.....	Lib.
Richmond-Wolfe.....	V.-F. DUROIS.....	Asbestos.....	P.C.
Rimouski.....	E. MORISSETTE.....	Mont Joli.....	P.C.
Roberval.....	J.-N. TREMBLAY.....	Ottawa, Ont.....	P.C.
Saint-Hyacinthe-Bagot.....	J.-H. T. RICARD.....	St. Hyacinthe.....	P.C.
Saint-Jean-Iberville-Napierville.....	Y. DUPUIS.....	St. Johns.....	Lib.
Saint-Maurice-Lafleche.....	J.-A. RICHARD.....	Shawinigan.....	Lib.
Saguenay.....	P. LARUE.....	Baie Comeau.....	P.C.
Shefford.....	M. BOIVIN.....	Granby.....	Lib.
Sherbrooke.....	M. ALLARD.....	Sherbrooke.....	P.C.
Stanstead.....	R. LÉTOURNEAU.....	Stanstead.....	P.C.
Témiscouata.....	A. FRÉCHETTE.....	Cabano.....	P.C.
Terrebonne.....	M. DESCHAMBAULT.....	St. Jérôme.....	P.C.
Trois Rivières.....	Hon. L. BALCER.....	Ottawa, Ont.....	P.C.
Vaudreuil-Soulanges.....	J.-M. BOURBONNAIS.....	Vaudreuil.....	P.C.
Villeuve.....	A. DUMAS.....	Malartic.....	Lib.
<i>Island of Montreal and Île Jésus—</i>			
Cartier.....	L. CRESTOHL.....	Montreal.....	Lib.
Dollard.....	G. ROULEAU.....	Montreal.....	Lib.
Hochelega.....	R. EYDES.....	Montreal.....	Lib.
Jacques Cartier-Lasalle.....	R. J. PRATT.....	Dorval.....	P.C.
Lafontaine.....	J. G. RATELLE.....	Montreal.....	Lib.
Laurier.....	Hon. L. CHEVRIER.....	Ottawa, Ont.....	Lib.
Laval.....	R. BOURDAGES.....	Montreal.....	P.C.
Maisonneuve-Rosemont.....	J.-P. DESCHATELETS.....	Montreal.....	Lib.
Mercier.....	A. GILLET.....	Montreal.....	P.C.
Mount Royal.....	A. A. MACNAUGHTON.....	Montreal.....	Lib.
Notre-Dame-de-Grâce.....	Hon. W. M. HAMILTON.....	Ottawa, Ont.....	P.C.
Outremont-Saint-Jean.....	R. BOURQUE.....	Outremont.....	Lib.
Papineau.....	A. MEUNIER.....	Montreal.....	Lib.
St. Ann.....	G. LOISELLE.....	Montreal.....	Lib.
Saint-Antoine-Westmount.....	A. R. WEBSTER.....	Westmount.....	P.C.
Saint-Denis.....	A. DENIS.....	Montreal.....	Lib.
Saint-Henri.....	H. "PIT" LESSARD.....	Montreal.....	Lib.
Saint-Jacques.....	C.-E. CAMPEAU.....	Montreal.....	P.C.
St. Lawrence-St. George.....	E. E. CHAMBERS.....	Montreal.....	P.C.
Sainte-Marie.....	G.-J. VALADE.....	Montreal.....	P.C.
Verdun.....	H. E. MONTEITH.....	Verdun.....	P.C.
Ontario—			
(85 members)			
Algoma East.....	Hon. L. B. PEARSON.....	Ottawa.....	Lib.
Algoma West.....	G. E. NIXON.....	Sault Ste. Marie.....	Lib.
Brantford.....	J. WRATTEN.....	Brantford.....	P.C.
Brant-Haldimand.....	J. A. CHARLTON.....	Paris.....	P.C.
Bruce.....	A. E. ROBINSON.....	Kincardine.....	P.C.
Carleton.....	R. A. BELL.....	Britannia Heights.....	P.C.
Cochrane.....	J.-A. HABEL.....	Kapuskasing.....	Lib.
Dufferin-Simcoe.....	Hon. W. E. ROWE.....	Newton Robinson.....	P.C.
Durham.....	R. P. VIVIAN.....	Port Hope.....	P.C.
Elgin.....	J. A. McBAIN.....	St. Thomas.....	P.C.
Essex East.....	Hon. P. J. MARTIN.....	Windsor.....	Lib.
Essex South.....	R. D. THRASHER.....	Windsor.....	P.C.
Essex West.....	N. L. SPENCER.....	Windsor.....	P.C.
Fort William.....	H. BADANAL.....	Fort William.....	Lib.
Glengarry-Prescott.....	O.-F. VILLENEUVE.....	Maxville.....	P.C.
Grenville-Dundas.....	A. C. CASSELMAN ¹	Prescott.....	P.C.
Grey-Bruce.....	E. A. WINKLER.....	Hanover.....	P.C.
Grey North.....	P. V. NOBLE.....	Shallow Lake.....	P.C.
Halton.....	A. BEST.....	Georgetown.....	P.C.
Hamilton East.....	Q. A. MARTINI.....	Hamilton.....	P.C.
Hamilton South.....	R. M. T. McDONALD.....	Hamilton.....	P.C.
Hamilton West.....	Hon. E. L. FAIRCLOUGH.....	Ottawa.....	P.C.
Hastings-Frontenac.....	Hon. S. E. SMITH.....	Ottawa.....	P.C.
Hastings South.....	L. E. GRILLS.....	Belleville.....	P.C.

¹ Died May 11, 1958; seat vacant at July 1, 1958.

Electoral Districts, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Fourth General Election, Mar. 31, 1958—continued

Province and Electoral District	Name of Member	P.O. Address	Party Affiliation
Ontario—concluded			
Huron.....	L. E. CARDIFF.....	Brussels.....	P.C.
Kenora-Rainy River.....	W. M. BENIDICKSON.....	Kenora.....	L.-Lab.
Kent.....	H. W. DANFORTH.....	Blenheim.....	P.C.
Kingston.....	B. G. ALLMARK.....	Kingston.....	P.C.
Lambton-Kent.....	E. J. CAMPBELL.....	Wallaceburg.....	P.C.
Lambton West.....	J. W. MURPHY.....	Camlachie.....	P.C.
Lanark.....	G. H. DOUCETT.....	Carleton Place.....	P.C.
Leeds.....	H. STANTON.....	Seeley's Bay.....	P.C.
Lincoln.....	J. SMITH.....	St. Catharines.....	P.C.
London.....	G. E. HALPENNY.....	Ottawa.....	P.C.
Middlesex East.....	H. O. WHITE.....	Glanworth.....	P.C.
Middlesex West.....	W. H. A. THOMAS.....	Strathroy.....	P.C.
Niagara Falls.....	W. L. HOUCK.....	Niagara Falls.....	Lib.
Nickel Belt.....	O. J. GODIN.....	Sudbury.....	Lib.
Nipissing.....	J. R. GARLAND.....	North Bay.....	Lib.
Norfolk.....	J. E. KNOWLES.....	Langton.....	P.C.
Northumberland.....	B. C. THOMPSON.....	Brighton.....	P.C.
Ontario.....	Hon. M. STARR.....	Ottawa.....	P.C.
Ottawa East.....	J. T. RICHARD.....	Ottawa.....	Lib.
Ottawa West.....	G. J. McILRAITH.....	Ottawa.....	Lib.
Oxford.....	W. B. NESBITT.....	Woodstock.....	P.C.
Parry Sound-Muskoka.....	G. H. AIKEN.....	Gravenhurst.....	P.C.
Peel.....	J. C. PALLETT.....	Erindale.....	P.C.
Perth.....	Hon. J. W. MONTEITH.....	Ottawa.....	P.C.
Peterborough.....	G. K. FRASER.....	Burleigh Falls.....	P.C.
Port Arthur.....	M. D. FISHER.....	Port Arthur.....	C.C.F.
Prince Edward-Lennox.....	C. A. MILLIGAN.....	Napanee.....	P.C.
Renfrew North.....	J. M. FORGIE.....	Pembroke.....	Lib.
Renfrew South.....	J. W. BASKIN.....	Ottawa.....	P.C.
Russell.....	J.-O. GOUR.....	Casselman.....	Lib.
Simcoe East.....	P. B. RYNARD.....	Orillia.....	P.C.
Simcoe North.....	H. E. SMITH.....	Barrie.....	P.C.
Stormont.....	G. CAMPBELL.....	Ottawa.....	P.C.
Sudbury.....	D. R. MITCHELL.....	Sudbury.....	Lib.
Timiskaming.....	A. PETERS.....	New Liskeard.....	C.C.F.
Timmins.....	M. W. MARTIN.....	Toronto.....	C.C.F.
Victoria.....	C. W. HODGSON.....	Lindsay.....	P.C.
Waterloo North.....	O. W. WEICHEL.....	Elmira.....	P.C.
Waterloo South.....	W. ANDERSON.....	Galt.....	P.C.
Welland.....	W. H. McMILLAN.....	Thorold.....	Lib.
Wellington-Huron.....	W. M. HOWE.....	Arthur.....	P.C.
Wellington South.....	A. D. HALES.....	Guelph.....	P.C.
Wentworth.....	F. E. LENNARD.....	Dundas.....	P.C.
York Centre.....	C. S. STINSON.....	Willowdale.....	P.C.
York East.....	R. H. McGREGOR.....	Toronto.....	P.C.
York-Humber.....	Miss M. AITKEN.....	Toronto.....	P.C.
York North.....	C. A. CATHERS.....	Newmarket.....	P.C.
York-Scarborough.....	F. McGEER.....	Don Mills.....	P.C.
York South.....	W. G. BEECH.....	Toronto.....	P.C.
York West.....	J. B. HAMILTON.....	Toronto.....	P.C.
City of Toronto—			
Broadview.....	Hon. G. H. HEES.....	Ottawa.....	P.C.
Danforth.....	R. H. SMALL.....	Toronto.....	P.C.
Davenport.....	M. D. MORTON.....	Toronto.....	P.C.
Eglinton.....	Hon. D. M. FLEMING.....	Toronto.....	P.C.
Greenwood.....	Hon. J. M. MacDONNELL.....	Ottawa.....	P.C.
High Park.....	J. W. KUCHEREPA.....	Toronto.....	P.C.
Parkdale.....	A. MALONEY.....	Toronto.....	P.C.
Rosedale.....	D. J. WALKER.....	Toronto.....	P.C.
St. Paul's.....	Hon. R. MICHENER.....	Toronto.....	P.C.
Spadina.....	C. E. REA.....	Toronto.....	P.C.
Trinity.....	E. R. LOCKYER.....	Toronto.....	P.C.
Manitoba—			
(14 members)			
Brandon-Souris.....	W. G. DINSDALE.....	Brandon.....	P.C.
Churchill.....	R. SIMPSON.....	Flin Flon.....	P.C.
Dauphin.....	R. E. FORBES.....	Dauphin.....	P.C.
Lisgar.....	G. R. MUIR.....	Roland.....	P.C.
Marquette.....	J. N. MANDZIUK.....	Oakburn.....	P.C.
Portage-Neepawa.....	G. C. FAIRFIELD.....	Portage la Prairie.....	P.C.
Provencher.....	W. H. JORGENSEN.....	Morris.....	P.C.

**Electoral Districts, Names and Addresses of Members of the House of Commons as Elected
at the Twenty-Fourth General Election, Mar. 31, 1958—continued**

Province and Electoral District	Name of Member	P.O. Address	Party Affili- ation
Manitoba—concluded			
St. Boniface.....	L. RÉGNIER.....	St. Boniface.....	P.C.
Selkirk.....	E. STEFANSON.....	Gimli.....	P.C.
Springfield.....	W. V. YACULA.....	Winnipeg.....	P.C.
Winnipeg North.....	W. M. SMITH.....	Winnipeg.....	P.C.
Winnipeg North Centre.....	J. MACLEAN.....	Winnipeg.....	P.C.
Winnipeg South.....	G. C. CHOWN.....	Winnipeg.....	P.C.
Winnipeg South Centre.....	Hon. G. CHURCHILL.....	Ottawa, Ont.....	P.C.
Saskatchewan— (17 members)			
Assiniboia.....	H. R. ARGUE.....	Kayville.....	C.C.F.
Humboldt-Melfort.....	R. RAPP.....	Spalding.....	P.C.
Kindersley.....	R. L. HANBIDGE.....	KerRobert.....	P.C.
Mackenzie.....	S. J. KORCHINSKI.....	Rama.....	P.C.
Meadow Lake.....	A. C. CADIEU.....	Spiritwood.....	P.C.
Melville.....	J. N. ORMISTON.....	Cupar.....	P.C.
Moose Jaw-Lake Centre.....	J. E. PASCOE.....	Moose Jaw.....	P.C.
Moose Mountain.....	R. R. SOUTHAM.....	Gainsborough.....	P.C.
Prince Albert.....	Rt. Hon. J. G. DIEFENBAKER.....	Ottawa, Ont.....	P.C.
Qu'Appelle.....	Hon. F. A. G. HAMILTON.....	Ottawa, Ont.....	P.C.
Regina City.....	C. H. MORE.....	Regina.....	P.C.
Rosetown-Biggart.....	K. O. COOPER.....	Hawarden.....	P.C.
Rosthern.....	E. NASSERDEN.....	Warman.....	P.C.
Saskatoon.....	H. F. JONES.....	Saskatoon.....	P.C.
Swift Current-Maple Creek.....	J. McINTOSH.....	Swift Current.....	P.C.
The Battlefords.....	A. R. HORNER.....	Blaine Lake.....	P.C.
Yorkton.....	G. D. CLANCY.....	Raymore.....	P.C.
Alberta— (17 members)			
Acadia.....	J. H. HORNER.....	Pollockville.....	P.C.
Athabasca.....	F. J. BIGG.....	Westlock.....	P.C.
Battle River-Camrose.....	C. S. SMALLWOOD.....	Irma.....	P.C.
Bow River.....	E. M. WOOLLIAMS.....	Calgary.....	P.C.
Calgary North.....	Hon. D. S. HARKNESS.....	Ottawa, Ont.....	P.C.
Calgary South.....	A. R. SMITH.....	Calgary.....	P.C.
Edmonton East.....	W. SKOREYKO.....	Edmonton.....	P.C.
Edmonton-Strathcona.....	T. J. NUGENT.....	Edmonton.....	P.C.
Edmonton West.....	M.-J.-A. LAMBERT.....	Ottawa, Ont.....	P.C.
Jasper-Edson.....	H. M. HORNER.....	Barrhead.....	P.C.
Lethbridge.....	D. R. GUNDLOCK.....	Warner.....	P.C.
Macleod.....	L. E. KINDT.....	High River.....	P.C.
Medicine Hat.....	E. W. BRUNSDEN.....	Brooks.....	P.C.
Peace River.....	G. W. BALDWIN.....	Peace River.....	P.C.
Red Deer.....	H. G. C. ROGERS.....	Red Deer.....	P.C.
Vegreville.....	F. J. W. FANE.....	Mundare.....	P.C.
Wetaskiwin.....	J. S. SPEAKMAN.....	Wetaskiwin.....	P.C.
British Columbia— (22 members)			
Burnaby-Coquitlam.....	E. REGIER.....	East Burnaby.....	C.C.F.
Burnaby-Richmond.....	J. A. W. DRYSDALE.....	Vancouver.....	P.C.
Cariboo.....	W. C. HENDERSON.....	Rolla.....	P.C.
Coast-Capilano.....	W. H. PAYNE.....	West Vancouver.....	P.C.
Comox-Alberni.....	H. C. McQUILLAN.....	Courtenay.....	P.C.
Esquimalt-Saanich.....	Hon. G. R. PEARCES.....	Ottawa, Ont.....	P.C.
Fraser Valley.....	W. H. HICKS.....	Chilliwack.....	P.C.
Kamloops.....	Hon. E. D. FULTON.....	Ottawa, Ont.....	P.C.
Kootenay East.....	M. L. McFARLANE.....	Cranbrook.....	P.C.
Kootenay West.....	H. W. HERRIDGE.....	Naskusp.....	C.C.F.
Nanaimo.....	W. F. MATTHEWS.....	Nanaimo.....	P.C.
New Westminster.....	W. A. McLENNAN.....	New Westminster.....	P.C.
Okanagan Boundary.....	D. V. PUGH.....	Oliver.....	P.C.
Okanagan-Revelstoke.....	S. A. FLEMING.....	Vernon.....	P.C.
Skeena.....	F. HOWARD.....	Terrace.....	C.C.F.
Vancouver-Burrard.....	J. R. TAYLOR.....	Vancouver.....	P.C.
Vancouver Centre.....	D. JUNG.....	Vancouver.....	P.C.
Vancouver East.....	H. E. WINCH.....	Vancouver.....	C.C.F.
Vancouver-Kingsway.....	J. F. BROWNE.....	Vancouver.....	P.C.
Vancouver-Quadra.....	Hon. H. C. GREEN.....	Ottawa, Ont.....	P.C.
Vancouver South.....	E. J. BROOME.....	Vancouver.....	P.C.
Victoria.....	A. D. McPHILLIPS.....	Victoria.....	P.C.

Electoral Districts, Names and Addresses of Members of the House of Commons as Elected at the Twenty-Fourth General Election, Mar. 31, 1958—concluded

Province and Electoral District	Name of Member	P.O. Address	Party Affiliation
Yukon Territory— (1 member) Yukon.....	E. NIELSEN.....	Whitehorse.....	P.C.
Northwest Territories— (1 member) Mackenzie River.....	M. A. HARDIE.....	Yellowknife.....	Lib.

Page 60, Provincial Governments

With reference to the footnote to page 60, a provincial election was held in only one province between Mar. 31, 1957, and the date of going to press (July 1, 1958)—Manitoba on June 16, 1958. The Ministry as at July 1 was as follows:—

Fifteenth Ministry—Manitoba

(Party standing at latest General Election, June 16, 1958: 26 Progressive Conservatives, 19 Liberal-Progressives, 11 Co-operative Commonwealth Federation and 1 Independent.)

Premier and Acting Provincial Treasurer.....	HON. CHARLES DUFFERIN ROBLIN
Deputy Premier, Minister of Agriculture and Acting Minister of Public Works.....	HON. ERICK F. WILLIS
Attorney General.....	HON. STERLING LYON
Provincial Secretary.....	HON. MARCEL BOULIC
Minister of Labour and Acting Minister of Municipal Affairs....	HON. JOHN W. W. THOMPSON
Minister of Education.....	HON. STEWART MCLEAN
Minister of Health and Public Welfare.....	HON. GEORGE JOHNSON
Minister of Mines and Resources and Acting Minister of Industry and Commerce.....	HON. GURNEY EVANS
Minister of Public Utilities.....	HON. JACK CARROLL

Page 76, Federal Royal Commissions

Nature of Commission	Commissioners	Date
To inquire into the Export of Energy and sources of energy in Canada.	HENRY BORDEN, Chairman J.-LOUIS LEVESQUE GEORGE EDWIN BRITNELL GORDON G. CUSHING ROBERT D. HOWLAND LEON J. LADNER R. M. HARDY	Oct. 15, 1957
To inquire into the extent and causes of the price spreads on fish and farm products between producer and consumer.	ANDREW STEWART, Chairman DORTHY WALTON HOWARD MAC KICHAN ROMEO MARTIN W. M. DRUMMOND CLEVE KIDD BERNARD COUVRETTE	Dec. 10, 1957
To inquire into the dispute between the Canadian Pacific Railway and the Brotherhood of Locomotive Firemen and Enginemen.	HON. MR. JUSTICE ROY LINDSAY KELLOCK, Chairman HON. MR. JUSTICE CAMPBELL C. McLAURIN HON. MR. JUSTICE JEAN MARTINEAU	Jan. 17, 1958
To inquire into the distribution of railway box-cars for prairie grain movement.	HON. JOHN BRACKEN	Jan. 31, 1958

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Distribution of Population Canada 1956

Répartition de la population Canada 1956

Prepared from Census 1956 data by the Dominion Bureau of Statistics.
To be used as an overlay on the accompanying Principal Mineral Areas map.

Établie par le Bureau fédéral de la statistique d'après les données du
recensement de 1956, de façon à pouvoir s'appliquer sur la carte (ci-jointe)
des principales régions minérales.

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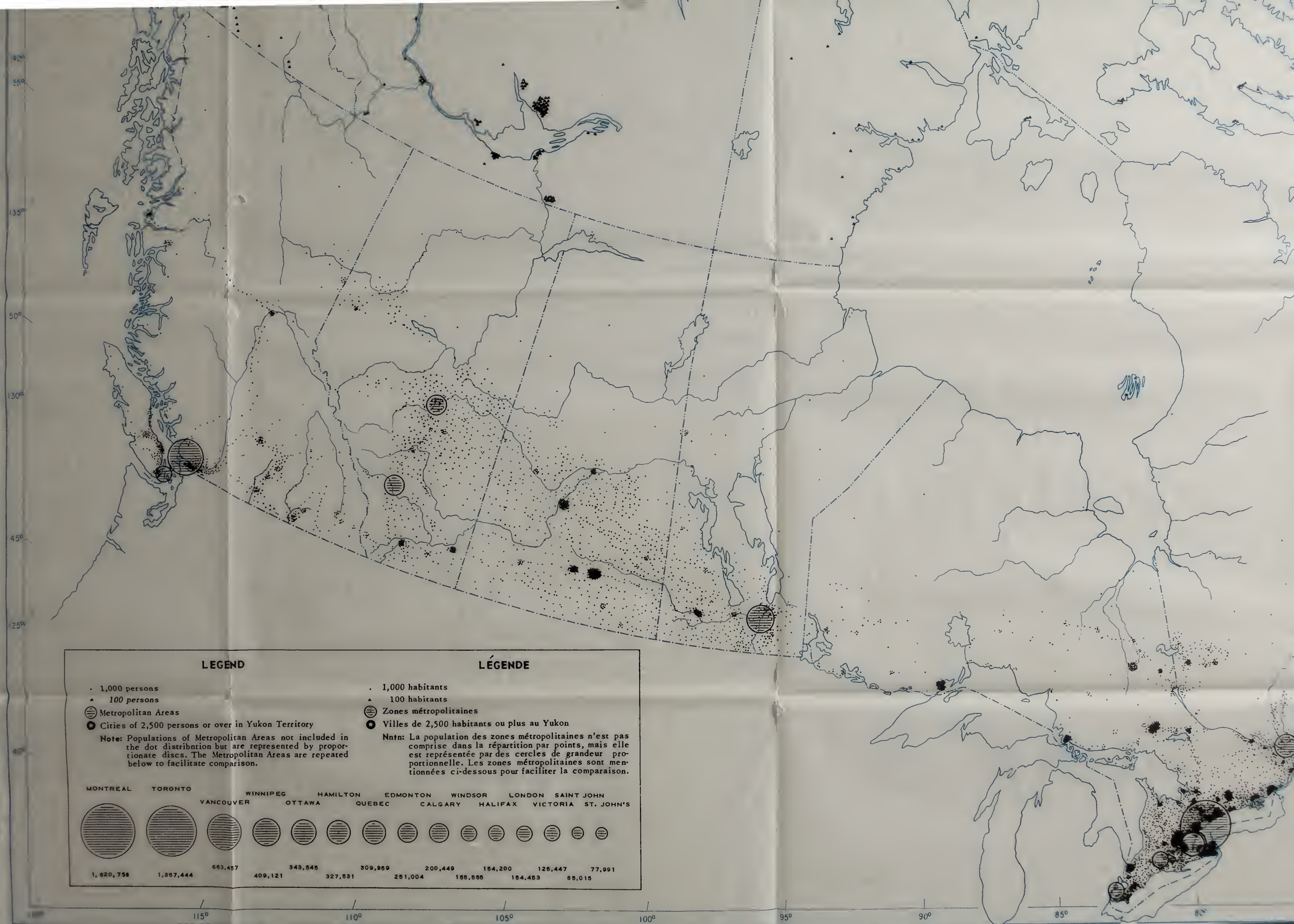
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